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BEFORE THE
POSTAL REGULATORY COMMISSION

Institutional Cost Contribution Requirement for Competitive Products	:	**Docket No. RM2022-2**

INITIAL COMMENTS OF UNITED PARCEL SERVICE, INC. ON SUPPLEMENTAL NOTICE OF PROPOSED RULEMAKING AND ORDER INITIATING THE THIRD REVIEW OF THE INSTITUTIONAL COST CONTRIBUTION REQUIREMENT FOR COMPETITIVE PRODUCTS

(February 25, 2022)

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United Parcel Service, Inc. ("UPS") respectfully submits these initial comments in response to the Postal Regulatory Commission's Supplemental Notice of Proposed Rulemaking and Order Initiating the Third Review of the Institutional Cost Contribution Requirement for Competitive Products, Dkt. No. RM2022-2 (Nov. 18, 2021) ("Order No. 6043" or the "Order").

INTRODUCTION

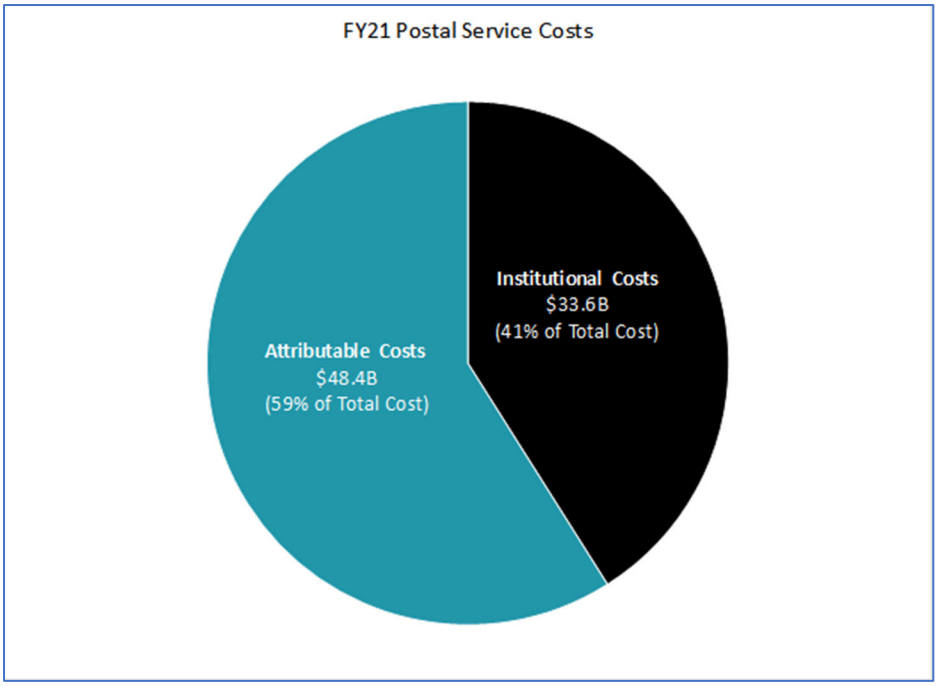
The regulatory framework at issue is straightforward. In the Postal Accountability and Enhancement Act ("Accountability Act" or the "Act"), Congress directed the Commission to "allocate the total institutional costs of the Postal Service appropriately between market-dominant and competitive products." 39 U.S.C. § 3622(b)(9). In determining the "appropriate share" to be allocated to competitive products specifically, the Act directs the Commission to consider all relevant factors, including any Postal Service costs that "are uniquely or disproportionately associated with any competitive products." 39 U.S.C. §§ 3633(a)(3), 3633(b).

The Commission, however, is not implementing these straightforward directives. In 2020, the D.C. Circuit rejected and remanded the Commission's Order imposing a formula for the appropriate share of institutional costs that must be covered by competitive products. Now the Commission is again proposing the exact same formula without taking into account the central points raised by the Court. In particular, the Court stated that, in setting the appropriate share, the Commission *must* consider any and all costs "uniquely or disproportionately" associated with any competitive products. Yet the Commission has again failed to do so, failing to identify *a single dollar* of institutional costs that meets this standard, and its proposed formula does nothing to take such costs into account.

This failure is especially troubling because, as the D.C. Circuit recognized, the Commission takes a very narrow approach to how it requires the Postal Service to attribute costs to its products. Specifically, the Commission requires the Postal Service to attribute only those costs that are unambiguously caused exclusively by a single product. Because the Postal Service delivers multiple products, including the letter mail, many costs do not meet this narrow standard for cost attribution. As a result, the Postal Service does not attribute over $33 billion per year of costs to any products at all.

The Postal Service calls these unattributed costs "institutional costs." As depicted below, they amount to over 40% of the Postal Service's total costs.

Figure 1: Postal Service Costs



Next, the Commission has set the share of institutional costs that packages must recover at very low levels, even as the volume of packages has grown tremendously and letter mail has declined dramatically. After the Accountability Act was passed in 2007, the Commission initially set the "appropriate share" for packages at 5.5%,

reasoning that this minimal requirement would allow the Postal Service's nascent package delivery business to get off the ground.

As Figure 2 illustrates, around that time period, mail carriers largely carried and delivered the letter mail.

Figure 2: Before

Postal Service trucks and operations were also largely designed around delivering the letter mail. The idea was that mail carriers could put an extra package or two in empty spaces in trucks and mail bags, allowing the Postal Service to generate more revenue without much effort. During that era, it did not matter as much that packages bore little responsibility for the Postal Service's institutional costs, as those costs were primarily caused (and could be recovered) by letter mail.

But times have changed, and the Postal Service's business has changed dramatically. Since 2007, given the American public now largely communicates electronically, the Postal Service's letter mail volumes have declined significantly. At the same time, the Postal Service's package delivery business has skyrocketed, putting

pressure on many aspects of its operations, including delivery and transportation. By 2015, the Postal Service stated that it was focused on transforming into "a delivery service for the e-commerce era" in which it will deliver "fewer letters and more packages."[1] And those trends have become even more pronounced in the years since. More recently, the Postal Service observed that "2020 presented the USPS with an extreme shift as letter mail continued its steep decline and package mail volumes grew rapidly while the COVID-19 pandemic swept the country."[2]

Packages are much more expensive to deliver than letters, because they are far heavier and bulkier. They require bigger trucks, and different sorting and processing equipment and operations. As illustrated below, today's mail carrier is weighed down by packages, and Postal Service trucks are stuffed full of them.

Figure 3: After

[1] Devin Leonard, *It's Amazon's World. The USPS Just Delivers in It*, Bloomberg Businessweek (July 30, 2015, 7:00 AM), https://www.bloomberg.com/news/articles/2015-07-30/it-s-amazon-s-world-the-usps-just-delivers-in-it.

[2] Bill McAllister, *PMG DeJoy Calls for 'New Tone' for U.S. Postal Service*, Linn's Stamp News (Jan. 5, 2021), https://www.linns.com/news/postal-updates/pmg-dejoy-calls-for-new-tone-for-u.s.-postal-service.

Packages are thus contributing much more to the Postal Service's overall costs, including institutional costs, than ever before. But the Commission's approach to setting the appropriate share has not taken into account this fundamental shift in the Postal Service's business mix and focus. Rather than adjusting its allocation approach as mail volumes declined and package volumes soared, the Commission kept the same 5.5% contribution level in place for competitive products for over a decade, leaving packages with little responsibility for the Postal Service's $33 billion or more of institutional costs.

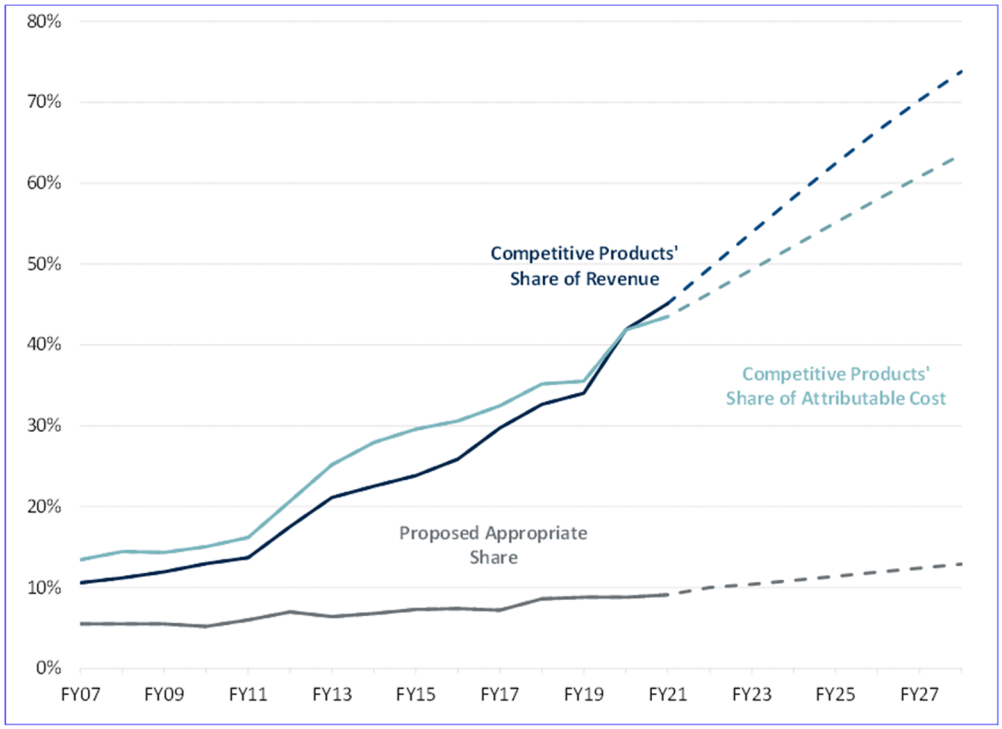
In 2017, the Commission proposed to replace the 5.5% figure with a formula that combines a number of complex variables to calculate the share of institutional costs that must be recovered by packages. But none of these variables actually estimates what share of institutional costs are associated with competitive products. Nor does the formula take into account the relative growth of competitive products and the sharp decline of the mail. In the end, the results of the Commission's formula have one consistent thread—like the original 5.5%, the appropriate share percentages generated by the formula are so low they are inconsequential. For FY2021, for example, the formula generated an appropriate share of just 9.1%, even as packages were responsible for roughly 45% of the Postal Service's revenue.

Every dollar of institutional costs that is not covered by competitive products must be covered by market-dominant products like mail in order for the Postal Service to break even. But with letter mail in a long-term secular decline, market-dominant products are covering a smaller and smaller share of institutional costs, even as competitive products' contribution has exceeded the appropriate share requirement. In FY2021, for example, market-dominant products covered only 42.7% of institutional

costs, even as the Commission's formula required competitive products to cover just 9.1%. These figures do not add up to recovering *total* institutional costs (100%). As a result, the Commission is failing to require that the Postal Service appropriately allocate its *total* institutional costs between market-dominant products (letter mail) and competitive products (packages). And the Postal Service loses billions of dollars every year because it does not recover its institutional costs, even as it delivers more and more packages.

The formula that the Commission is now proposing again will do nothing to stop these trends, but will instead only ensure these trends continue or worsen. As the following figure shows, even as competitive products' share of total revenue and share of total attributable costs has risen dramatically (and will continue to rise), the share of institutional costs that competitive products must cover, as calculated by the Commission's formula, has barely budged.

Figure 4: Proposed Appropriate Share Measure and Competitive Products' Growing Importance[3]



As this figure illustrates, in 2023, if current trends continue, competitive products will be responsible for *nearly 55%* of the Postal Service's revenue (and approximately *50%* of attributable costs). Yet the Commission's formula will hold that business responsible for just a little over *10%* of institutional costs. That is not logical. Moreover, because letter mail is in a long-term decline, the market-dominant side of the business will not be able to make up the gap. Put together, the two lines of business will continue to fall well short of recovering total institutional costs, and neither will be profitable.

[3] PRC-ACR2020-LR1 and analogous files from previous fiscal years; USPS-FY21-1; PRC-ACR2020-LR10; QSS Data, US Census Bureau. The solid lines represent actual shares for FY2007 - FY2021, and the dashed lines represent projected shares from FY2022 - FY2028. Projections are based on the observed trends in relevant variables between FY2018 and FY2021. The Proposed Appropriate Share is calculated using the current PRC formula for appropriate share, which the Commission has proposed to continue using.

These are not the results that Congress intended. In the Accountability Act, Congress gave the Postal Service the flexibility to price competitive products, but on the condition that "competitive products and services will have to pay their own costs,"[4] including institutional costs. Private businesses—including package delivery businesses like UPS—must generate revenues sufficient to recover *all* costs, not just costs they choose to attribute to individual products. Congress did not intend for the Postal Service to compete unfairly against private enterprise by offering any product, including packages, at prices insufficient to cover costs. Yet that is precisely what is happening today, and the Commission's failure to set the required contribution level from competitive products at an appropriate level is a key reason why.

In Order No. 6043, the Commission asserts that it cannot do any better in allocating institutional costs to competitive products because it is "not possible to quantify the degree to which" institutional costs are associated with competitive products.[5] The Commission argues there is no "economically sound"[6] way to allocate responsibility for total institutional costs based on considering those costs that "are uniquely or disproportionately associated with any competitive products." 39 U.S.C. § 3633(b). And the Commission further argues that UPS's proposal for allocating total institutional costs between the two business lines amounts to a form of "fully distributed

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[4] H.R. REP. 109-66(I), at *44.

[5] Order No. 6043, at 82.

[6] *Id*. at 73.

costing" which, in the Commission's view, is economically unwise[7] and might "harm the Postal Service and its competitive business."[8]

The Commission's reasoning indicates that, if it had written the Accountability Act, it may have written it differently. But, respectfully, the Commission is obligated to give effect to the Accountability Act as written, not to replace it with a different regulatory approach. To comply with the Accountability Act, the Commission should change course and set the "appropriate share" at a level that holds the Postal Service's package delivery business accountable for *all* of the institutional costs associated with that business, in addition to ensuring that competitive products contribute to those costs that support both the competitive and market-dominant businesses. UPS provides several potential approaches below. None is absolutely perfect, and none ever will be. But they are far more consistent with the Accountability Act than the current approach.

ARGUMENT

I. THE COMMISSION'S ORDER IS INCONSISTENT WITH THE STATUTORY REQUIREMENT TO CONSIDER ALL RELEVANT CIRCUMSTANCES

A. The Commission's Order Is Inconsistent With The D.C. Circuit's Holding And The Text Of The Statute, Which Require Consideration Of Costs Uniquely Or Disproportionately Associated With Competitive Products

The Commission states that its Order "[a]ddresses the issues identified" by the D.C. Circuit.[9] In fact, it fails to do so and its reasoning conflicts with the explicit reasoning and instructions the D.C. Circuit set forth in its opinion.[10]

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[7] *Id*. at 87.

[8] *Id*. at 72-73.

[9] *Id*. at 1.

[10] While the Commission claims "broad authority and discretion" to apply the appropriate share requirement, *see* Order No. 6043, at 43, 45-57, that discretion does

1. The Commission's Order Does Not Consider Costs Uniquely Or Disproportionately Associated With Competitive Products

The Accountability Act states: "In making [the appropriate share] determination, the Commission shall consider all relevant circumstances, including the prevailing competitive conditions in the market, and the degree to which any costs are uniquely or disproportionately associated with any competitive products." 39 U.S.C. § 3633(b). It is axiomatic that an agency must consider what Congress says it "shall consider."[11]

The D.C. Circuit remanded the Commission's last order on appropriate share (Order No. 4963) because the Commission failed to consider costs uniquely or disproportionately associated with competitive products. In particular, the D.C. Circuit held that "the Commission erred in simply assuming, without adequate explanation, that 'there are no institutional costs uniquely or disproportionately associated with competitive products.'" *United Parcel Serv.*, 955 F.3d at 1041. The D.C. Circuit explained that "the Commission cannot simply assume that the 'uniquely or disproportionately associated with' standard is subsumed by the 'reliably identified

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not extend to an interpretation in conflict with the plain language of the statute or in defiance of the D.C. Circuit's opinion and mandate. *See, e.g.*, *United States v. Home Concrete & Supply, LLC*, 566 U.S. 478, 487-88 (2012) (plurality opinion); *New York v. EPA*, 443 F.3d 880, 886 (D.C. Cir. 2006). Indeed, the D.C. Circuit already held: "No deference is due to the Commission's current position because the disputed Order fails to apply the relevant terms of the statute, and it offers no reasoned basis for this failure." *United Parcel Serv., Inc. v. Postal Regul. Comm'n*, 955 F.3d 1038, 1041 (D.C. Cir. 2020). The same is true now.

11 *See, e.g.*, *United Parcel Serv*., 955 F.3d at 1050-51 ("An agency's failure to consider and address during rulemaking an important aspect of the problem renders its decision arbitrary and capricious. A statutorily mandated factor, by definition, is an important aspect of any issue before an administrative agency . . . ."); Pub. Citizen v. Fed. Motor Carrier Safety Admin., 374 F.3d 1209, 1216 (D.C. Cir. 2004) ("[T]he rule is arbitrary and capricious because the agency failed to consider the impact of the rules on the health of drivers, a factor the agency must consider under its organic statute.").

causal relationships' standard" because "[t]hat would impermissibly conflate the language of § 3633(a)(2)—which incorporates the definition of 'costs attributed' from § 3631(b)—with the evidently distinct language of § 3633(b)." *Id.* at 1049. And the D.C. Circuit expressly instructed that "on remand, the Commission must consider all the costs referenced under § 3633(b), as the Accountability Act clearly commands." *Id.* at 1051-52.

The Commission does not meaningfully address the D.C. Circuit's holding and its mandate. The Commission now concedes that "uniquely or disproportionately associated" is a broader standard than "reliably identified causal relationship."[12] Yet despite now recognizing that institutional costs uniquely or disproportionately associated with competitive products can exist, the Commission does not identify even *a single dollar* classified as institutional that is uniquely or disproportionately associated with competitive products.

The Commission's explanation for its failure to identify *any* institutional costs uniquely or disproportionately associated with competitive products is the assertion that such costs are not "discernable and measurable in a manner that is economically sound."[13] The Commission's reasoning fails on several grounds.

First, the Commission's claim that it is impossible to precisely identify which institutional costs are uniquely or disproportionately associated with competitive products is not sufficient for the Commission to abdicate its responsibility to consider them. Even if the analysis is difficult or imperfect, the Commission should do the best it

[12] Order No. 6043, at 7, 44.

[13] *Id*. at 54.

can. *See U.S. Chamber of Commerce v. SEC*, 412 F.3d 133, 143 (D.C. Cir. 2005) ("That particular difficulty [in determining cost] may mean the Commission can determine only the range within which a fund's cost of compliance will fall, … but … it does not excuse the Commission from its statutory obligation to determine *as best it can* the economic implications of the rule it has proposed.") (emphasis added); *Pub. Citizen*, 374 F.3d at 1221 (holding that, in the face of uncertainty, an agency must "exercise its expertise to make tough choices about which of the competing estimates is most plausible, and to hazard a guess as to which is correct, even if ... the estimate will be imprecise"). The Commission's concern about imperfection is no excuse for doing nothing to estimate those costs that the Act specifically instructs the Commission to consider.

Indeed, the Commission fails to identify *any* approach that it has actually tried to use to identify or estimate those costs uniquely or disproportionately associated with competitive products. There is no reason such an estimate is impossible even to try. The Commission defines the relevant terms in the statute as follows: "A cost is 'associated' with a Competitive product or products if the cost is 'related, connected, or combined together' with the product(s). An association is 'unique' if a cost is distinctly related or connected with a Competitive product or products. An association is 'disproportionate' if the cost's relationship with that product or products is 'out of proportion' relative to the cost's relationship to other products or groups of products."[14] It is not impossible to determine if a cost is associated with a product, and in particular if it is distinctly related to a product or if that association is greater than the association

[14] Order No. 6043, at 7.

with other products. As detailed in Section II, there are economically sound ways to apply these concepts to the costs at issue here. The Order fails to address any of these possibilities or any other possibility for applying its own definitions to the costs of the Postal Service.

Second, the D.C. Circuit has already rejected a similar argument by the Commission, in Order No. 4963, that it does not have to consider these costs because they are too hard to measure. The Commission then stated that it did not have to take account of costs uniquely or disproportionately associated with competitive products because "any attempt to assign a proportion of institutional costs to competitive products . . . presents multiple problems."[15] However, unlike Section 3633(a)(2), which requires attribution of costs based on "reliably identified causal relationships," Section 3633(b) contains no such limitation, instead requiring consideration of "*any* costs [that] are uniquely or disproportionately associated with any competitive products." 39 U.S.C. § 3633(b) (emphasis added).

The D.C. Circuit recognized this distinction: "[B]ecause the costs attributed test under § 3633(a)(2) is conservative, there may be institutional costs that are 'uniquely or disproportionately associated with competitive products,' even though they cannot be said to stand in 'reliably identified causal relationships' with them." *United Parcel Serv.*, 955 F.3d at 1051. The D.C. Circuit therefore held that "the Commission should fully address the issue left open in the court's 2018 decision" on attributable costs. *Id.*

The Commission failed to address that issue by applying a test whereby no costs uniquely or disproportionately associated with competitive products need be considered

[15] Order No. 4963 at 146-47.

if all such costs cannot be calculated in an "economically sound" manner. This is nothing more than a reapplication of the same, conservative "reliably identified" test, which does not apply to Section 3633(b). Indeed, the Order makes clear this equivalence, stating that "the *only* economically sound method to measure the association of costs with products is through activity-based costing, which is based on reliably identified causal relationships."[16]

As the D.C. Circuit has already explained, "reliably identified causal relationships" is the wrong test for whether costs are uniquely or disproportionately associated with competitive products. The D.C. Circuit held that the Commission must consider whether "some of the Postal Service's institutional costs—and especially its unattributed inframarginal costs—[are] still *related in some meaningful way* to competitive products." *United Parcel Serv.*, 955 F.3d at 1045 (emphasis added). The Order fails to apply this more expansive test, which necessarily follows from the fact that the statutory phrases are very different: Instead of "causal relationship" in Section 3633(a)(2), there is the lower standard of "associat[ion]" in Section 3633(b); instead of a causal link "to such [competitive] product," there is the lower standard of "unique[]" ***or*** "disproportionate" association with all competitive products; and instead of "reliably identified," there is no such reliability limitation at all. The Commission accounts for none of these statutory differences in its "economic soundness" test.

Third, the Commission's purported "economically sound" requirement employs a double standard. The Commission has approved numerous Postal Service costing methodologies that rely on imperfect estimations, judgments, and assumptions. *See,*

[16] Order No. 6043, at 73.

e.g., Order No. 6043, at 126 ("The Postal Service uses econometric studies, or in some cases, 'judgment,' to estimate volume variabilities that it uses to identify volume-variable costs, which are part of attributable costs."). None of these methodologies approved by the Commission would meet the extreme degree of economic "soundness" that the Commission now says it must require in setting the appropriate share.

To name just a few examples, the Commission allows the Postal Service to *assume* that all vehicle related costs (including supplies and materials, labor costs associated with vehicle maintenance, and vehicle depreciation) are "volume variable" to the exact same extent as the labor using that vehicle.[17] Similarly, the Commission allows the Postal Service to *assume* that all equipment related costs (including the labor costs associated with maintaining the equipment and equipment depreciation) are volume variable to the exact same extent as the labor using that equipment.[18] The Commission has never made the Postal Service prove these assumptions were perfectly accurate. Rather, it has allowed the Postal Service to employ them as a reasonable way to *estimate* those costs that should be attributed to products. There is no reason the Commission could not make similar estimates in setting the appropriate share.

More broadly, in the Postal Service's Summary Description files, which explain in detail the approved costing methodology for all of the various cost pools, the description that costs "do not vary with volume," or some variant of that expression, appears in

[17] *See* Summary Description files CS12-20 and CS20-20.

[18] *See* Summary Description files CS11-20 and CS20-20.

describing the costing methodology for more than 60 components or cost pools.[19] In virtually all cases, this refers to a *judgment* made by the Postal Service that the costs are not variable, which the Commission approved without requiring any rigorous empirical analysis from the Postal Service, much less definitive economic proof.

Nor does the Commission apply the "economically sound" test to its own formula for appropriate share. For the reasons explained below in Section III, the formula would not satisfy the "economically sound" test. The Commission may not apply stricter criteria of economic rigor to alternative approaches proposed by UPS and other interested parties than it does to its own costing approaches, including the institutional cost formula.

Finally, the Commission's "economically sound" requirement also conflicts with the purpose of the Accountability Act. As detailed below, the statutory purpose is to ensure fair competition with a level playing field and to prevent subsidization. But the field is not level if the Postal Service treats any cost that cannot be tied to competitive products in an economically perfect manner as though the cost does not exist. No private company could operate in this way. The Postal Service is simply failing to apportion costs in a rational manner that ensures *total* cost coverage, consistent with how private companies account for and manage costs.

[19] *See* Summary Description files. Phrases fitting this description include assertions that the costs in the relevant components "are considered to not vary with volume," "do not vary with volume," "are classified as non-volume variable," "are considered non-volume variable," and others.

2. Economic Analysis Confirms That Many Institutional Costs Are Meaningfully Associated With Competitive Products

The Commission's statement that "[t]here is no meaningful relationship between institutional costs and individual products (or between institutional costs and groups of products)"[20] cannot withstand basic scrutiny. When specific drivers of institutional costs are considered, there is an obvious and meaningful relationship between many types of institutional costs and competitive products. The below categories are not exhaustive, but they plainly belie the Order's premise that it is impossible to identify any costs uniquely or disproportionately associated with competitive products.

(a) Peak Season Costs

The costs the Postal Service incurs to ramp up its operations during package peak season are a clear example of costs that are meaningfully associated with package deliveries. The conclusion is essentially self-evident: If the Postal Service did not deliver packages, it would not bear the additional costs arising from the need to deliver large numbers of packages during package peak season. The existence of these additional costs are thus strongly associated with competitive products.

Yet the Commission allows the Postal Service to classify many peak season costs as institutional and then claims that, once so classified, their relationship to packages becomes obscure. When UPS raised this issue in another docket, the Commission denied UPS's petition but noted that the Postal Service should accelerate studies on peak season costs.[21] The Commission's only response to the point that peak season costs are uniquely or disproportionately associated with competitive

[20] Order No. 6043, at 73.

[21] *See* Order No. 6048, at 1-10.

products was to refer back to the legal reasoning in Order No. 4963—that is, the same order the D.C. Circuit had rejected.[22]

The Commission then noted that UPS could comment further on the issue in this docket.[23] UPS does so now, and the Commission should address the extent to which package peak season costs are uniquely or disproportionately associated with competitive products. Indeed, the Commission's failure to properly attribute peak season costs in the first place only heightens the need to consider those costs under Section 3633(a)(3).

Every year, the Postal Service acknowledges that it must incur significant costs to scale up for package peak season. Recently, for example, the Postal Service explained that, to scale up for its last peak season, from November 6 through December 31, 2021, the Postal Service hired approximately 45,000 additional temporary employees (30,000 processing employees and 15,000 retail and delivery employees) and 1,100 additional truck drivers.[24] Over that same period, the Postal Service activated 70 temporary mail processing and logistics annexes to process packages and activated 46 package support annexes with two- to five-year lease terms to help acquire high space in high-demand areas. The Postal Service increased its air capacity by 12%

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[22] *See id*. at 20-21 ("[I]nstitutional costs do not include any costs that would be uniquely or disproportionally associated with Competitive products because all such costs 'are not already attributed to those products under the Commission's current cost attribution methodology.'") (quoting Order No. 4963 at 28).

[23] *See id.* at 21 n.34.

[24] United States Postal Service, Office of Inspector General, Report Number: 21-206-R227, Fiscal Year 2022 Peak Mailing Season Preparedness (Nov. 19, 2021), at 6, available at https://www.uspsoig.gov/sites/default/files/document-library-files/2021/21-206-R22.pdf.

and expanded six surface transfer centers. To scale up for next year's peak season, the Postal Service is already procuring additional package sortation equipment to accommodate and expedite package handling and sortation. Indeed, the Postal Service's need to ramp up its operations to deliver packages during peak season has become so great that, as the OIG reports, "management implemented a new *year-round* strategy focused on a consistent build-up of employee complement, multi-year leases for facility space, and processing capacity to help ensure it would be sufficient for the FY2022 peak season" (emphasis added).[25]

Many of these peak season costs are attributed to competitive products, but not all. Some are classified instead as "institutional." For example, December city carrier labor costs exceed November city carrier costs by $270 million, reflecting the greater labor costs from package peak season, including from the hiring of temporary employees and the working of more overtime by existing employees.[26] Based on current cost attribution methods, however, the Postal Service will classify approximately *47%* of these additional costs as *institutional*.[27] December rural carrier costs exceeded November rural carrier costs by $142 million for similar reasons.[28] Based on current cost attribution methods, the Postal Service will classify approximately *64%* of these additional costs as institutional.[29] Highway transportation costs in December were $278

[25] *Id*.

[26] Based on Monthly Trial Balance reports.

[27] Calculated from USPS-FY2021-43.

[28] Based on Monthly Trial Balance reports.

[29] Calculated from USPS-FY2021-43.

million higher than in November.[30] Based on current cost attribution methods, the Postal Service will treat approximately 27%[31] of these costs as institutional.

No elaborate economic analysis is required to see that these *additional institutional costs* arising from *package peak season* are meaningfully associated with competitive products. If the Postal Service were delivering only the letter mail (which is on a long-term secular decline), it would not incur these significant additional costs to ramp up for package peak season. The Postal Service would not, for example, hire 45,000 additional temporary employees every November and December. Institutional costs would substantially *decline* as a result.

Instead, institutional costs grow because of package peak season. To comply with the Accountability Act, the Commission must consider all such costs in setting the appropriate share, which it is failing to do today. These peak season costs also demonstrate why a stand-alone cost analysis, as described below, would be beneficial. Identifying all such costs that would disappear if the Postal Service did not deliver packages would be an extremely informative measure of which costs—institutional or otherwise—are associated with competitive products, and which costs that business should bear.

(b) New Vehicle Purchases

The Postal Service's purchases of costly larger vehicles *designed* to accommodate packages (vehicles that replaced older, smaller trucks from decades past when the Postal Service delivered mostly letter mail) is another concrete illustration that

[30] Based on Monthly Trial Balance reports.

[31] Calculated from USPS-FY2021-43.

there are institutional costs meaningfully associated with competitive products.[32] Among other things, press reports indicate that the Postal Service was intentionally replacing its entire fleet of vehicles with "*UPS sized and style vehicles*"[33] designed primarily with competitive products in mind, at a potential cost of over $6 billion.[34] Yet, the Commission allows the Postal Service to classify large portions of these new vehicle costs as institutional, and then claims not to see any association with competitive products.

The high levels of institutional costs associated with these much larger vehicles designed to carry packages is another concrete demonstration of an association between institutional costs and competitive products. The Commission fails to acknowledge these facts or to account for them in setting the appropriate share. In Order No. 6043, the Commission simply notes that vehicle depreciation costs are divided into four different cost components, of which one ("other vehicles") comprises vehicles used for "administrative purposes" while the other three (city delivery, vehicle

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[32] Initial Comments of United Parcel Service, Inc. on Notice of Proposed Rulemaking to Evaluate the Institutional Cost Contribution Requirement for Competitive Products, Dkt. No. RM2017-1 (Jan. 23, 2017), at 32.

[33] Mike Colgan, *Familiar White Postal Service Trucks Too Small For Increasing Amount Of Parcels Being Mailed*, CBS SF BAY AREA (Jan. 19, 2015), http://sanfrancisco.cbslocal.com/2015/01/19/familiar-white-postal-service-trucks-too-small-for-increasing-amount-of-parcels-being-mailed/; Anne Steele, *Postal Service Seeks to Retire the Old Mail Truck*, WALL ST. J. (Feb. 12, 2015), www.wsj.com/articles/postal-service-seeks-to-retire-the-old-mail-truck-1423786375 ("'The postal service is experiencing record growth in package delivery, and obtaining vehicles that are designed with the changing mail mix in mind will help improve efficiency of delivery operations,' [USPS spokeswoman] Ms. Ninivaggi said.").

[34] Anne Steele, *Postal Service Seeks to Retire the Old Mail Truck*, WALL ST. J. (Feb. 12, 2015), www.wsj.com/articles/postal-service-seeks-to-retire-the-old-mail-truck-1423786375 ("The proposal is for some 180,000 'next-generation delivery vehicles'. The service says the trucks would ideally cost between $25,000 and $35,000.").

service, rural delivery) are used for mail delivery.[35] The Commission fails to address the possibility that, while the depreciation cost methodology might account for causal relationships with a *particular* competitive product, it does not account for costs uniquely or disproportionately associated with competitive products more broadly.[36]

Moreover, of these four categories, the Commission simply states that the "other vehicles" used for "administrative purposes" are classified as 100% institutional, because they are "not specific to any particular mail product or group of products."[37] But the Commission offers no specificity on what these "administrative purposes" *are*, why it is impossible to associate at least some of these costs with competitive products, or why—given the growth of the competitive products business—the Commission cannot conclude that these costs are indeed disproportionately associated with competitive products.

For the other three categories of delivery vehicles, the Commission merely describes the status quo, noting that depreciation costs for city delivery, vehicle service, and rural delivery vehicles are simply based on the attribution of city carrier labor costs, vehicle service driver labor costs, and rural carrier labor costs respectively.[38] But this approach assumes that there is a direct correlation between the attribution of labor

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[35] Order No. 6043, at 115.

[36] As UPS has argued previously, it does not agree with the methodology used to attribute vehicle costs to individual products. However, even if it did, the Commission's previous responses do not address the issue raised by UPS—whether the costs associated with vehicles that are larger than traditional postal vehicles are disproportionately associated with competitive products, and whether the methodology used to calculate the incremental costs *of competitive products as a group* is reliable or accurate.

[37] Order No. 6043, at 115.

[38] *Id*. at 115-16.

costs and the vehicle costs. Again, this reveals that the Commission is willing to accept imperfect assumptions and estimates when it comes to attributing costs, which highlights the very different standard it applies when it comes to setting the appropriate share.

(c) City Carrier Assistant Costs

UPS noted in prior filings that the Postal Service has hired tens of thousands of new employees, including City Carrier Assistants, which reflected the fact that "despite the continuing decline in overall mail volumes, growth in package volume is placing new demands on the Postal Service's delivery network."[39] Many of these costs are classified as institutional—but they clearly are associated with competitive products. The Postal Service is only hiring tens of thousands of new employees because it is focused on growing its package business.

In response, the Commission simply insists that "[s]uch costs are a function of the delivery network; they are not uniquely or disproportionately associated with Competitive products."[40] But this explanation fails to address the critical point: Market-dominant volumes have been plummeting for over a decade, while competitive volumes have surged. Thus, it is logical to conclude that, even if new delivery points have been added, the hiring of tens of thousands of *additional* city carrier assistants and other employees is disproportionately associated with competitive products, and the Commission should consider these costs when setting the appropriate share.

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[39] Initial Comments of United Parcel Service, Inc. on Notice of Proposed Rulemaking to Evaluate the Institutional Cost Contribution Requirement for Competitive Products, Dkt. No. RM2017-1 (Jan. 23, 2017), at 31-32.

[40] Order No. 6043, at 120.

(d) Headquarters and Management Costs

UPS has noted in prior filings that the Postal Service's headquarters and management costs are meaningfully associated with competitive products, even though the Commission allows the Postal Service to classify these costs as mostly institutional.[41] Again, the Commission's response is to describe its existing cost methodology as definitive, claiming that "[n]one of these costs identified by UPS" are "uniquely or disproportionately associated with Competitive products" because "[t]o the extent that they are classified as institutional, it is because the activities or assets for which they are incurred are not specific to any mail product or group of products, and would be incurred even if the Postal Service did not deliver any Competitive products."[42]

This assertion is unconvincing. If the Postal Service did not deliver any competitive products, it would obviously be able to "reduce certain headquarters expenses relating to administration and management," as the economist Dennis Carlton has pointed out.[43] The Postal Service also would be able to decrease expenses for

[41] Initial Comments of United Parcel Service, Inc. on Notice of Proposed Rulemaking to Evaluate the Institutional Cost Contribution Requirement for Competitive Products, Dkt. No. RM2017-1 (Jan. 23, 2017), at 28; Reply Comments of United Parcel Service, Inc. on Notice of Proposed Rulemaking to Evaluate the Institutional Cost Contribution Requirement for Competitive Products, Dkt. No. RM2017-1 (Mar. 9, 2017), at 15; Initial Comments of United Parcel Service, Inc. on Notice of Proposed Rulemaking to Evaluate the Institutional Cost Contribution Requirement for Competitive Products, Dkt. No. RM2017-1 (Apr. 16, 2018), at 12-14; Comments of United Parcel Service, Inc. on Revised Notice of Proposed Rulemaking to Evaluate the Institutional Cost Contribution Requirement for Competitive Products, Dkt. No. RM2017-1 (Sep. 12, 2018), at 14-15.

[42] Order No. 6043, at 125.

[43] Declaration of Dennis W. Carlton, Dkt. No. RM2017-1 (Mar. 9, 2017), at 21-22.

data processing supplies and services.[44] The Commission has failed to substantively address UPS's (and Professor Carlton's) arguments about how institutional costs include those that are incremental to competitive products. Instead, the Commission merely cites the existing, antiquated cost methodology, such as the "procedures approved by the Commission in Docket RM2008-2" *nearly 15 years ago* for allocating headquarters costs,[45] making no further effort to determine the proportion or amount of institutional costs the Postal Service could eliminate under an efficient reorganization if it did not deliver competitive products.

(e) Supply Personnel and City Carrier Street Time

UPS has noted that, when the Postal Service decides what percentage of costs to attribute to individual products, the Commission often allows it to set the percentage based on "judgment" or econometric studies, resulting in under-attribution of costs in categories such as supply personnel in CS16-18 (i.e., 0% based on "judgment") or city carrier street time (attributing only $4.8 billion of $12.7 billion in FY2018).[46] In response, the Commission admits that the Postal Service does use "econometric studies, or in some cases, judgment, to estimate volume variabilities."[47] But the Commission insists that "expert judgment" is appropriate because "any costing methodology employs some assumptions and therefore includes some judgment," and insists that (1) supply personnel costs do not contain any volume-variable costs because they simply "select,

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[44] *Id*. at 22.

[45] Order No. 6043, at 122.

[46] Reply Brief for Petitioner United Parcel Service, Inc., *United Parcel Serv., Inc. v. Postal Reg. Comm'n*, 955 F.3d 1038, No. 19-1026, ECF No. 1814772 (finalized Nov. 7, 2019), at 13-14.

[47] Order No. 6043, at 126.

pack, ship, and inventory supplies that do not vary with mail volume," while (2) city carrier street time is determined based on "assumptions" that are "reasonable as they are founded in facts, observation, and logic."[48]

But UPS's point was not that econometric judgment is always inappropriate, but that such judgment appears to have resulted in under-attribution of costs to products. This under-attribution further highlights that costs associated with competitive products are being classified as institutional.

(f) Package Processing and Delivery Technology

UPS noted previously that the Postal Service had invested "billions of dollars in recent years on efforts to bolster its ability to deliver parcels and to catch up with the innovations introduced by the private sector," including by "rolling out new package scanning systems in its delivery scanning systems, passive adaptive scanning systems, and mobile delivery devices."[49] Yet, although the Postal Service has apparently spent over $1 billion on information technology upgrades in connection with these new scanners in order to compete in the competitive products market,[50] the Commission fails

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[48] Order No. 6043, at 127-28.

[49] Initial Comments of United Parcel Service, Inc. on Notice of Proposed Rulemaking to Evaluate the Institutional Cost Contribution Requirement for Competitive Products, Dkt. No. RM2017-1 (Jan. 23, 2017), at 32.

[50] Adam Mazmanian, *Mail Carriers Get New Mobile Device*, FED. COMPUT. WEEK (Mar. 18, 2014), http://fcw.com/articles/2014/03/18/usps-mobile-device.aspx?m=1 ("The change is part of an IT infrastructure upgrade at the post office fueled by the explosion of e-commerce. The USPS is exploring replacing and upgrading the scanners at its larger processing centers, while bringing more advanced tracking technology to even the smallest post office location. 'We really are making a billion-dollar bet on the future of the shipping business,' Cochran said.").

to acknowledge that these costs are disproportionately associated with competitive products.

In response, the Commission argues that these capital equipment costs are attributed using a depreciation methodology. But the Commission fails to acknowledge that this depreciation methodology inevitably results in costs associated with competitive products being classified as institutional.[51]

For example, the Commission states that the Passive Adaptive Scanning System ("PASS") and Delivery Scanning System ("DSS") units have a 97.4% variability level.[52] It also notes that Point of Service ("POS ONE") and Intelligent Mail Device ("IMD") and Mobile Delivery Device ("MDD") scanners are "considered to be as volume-variable as the labor costs of the personnel that operate the equipment," and that their variability levels were 38.5%, 51.8%, and 45.2% respectively in FY2020.[53] But that means that approximately 61.5%, 48.2%, and 54.8% of these scanner-related costs are treated as institutional. Plainly a significant portion (if not all) of these institutional costs are associated with packages.

For example, the Office of Inspector General wrote in 2015 that the PASS system was a "cart-mounted, overhead scanning system used in delivery units to *scan packages* and identify associated delivery routes. PASS enables clerks without route knowledge training to *sort packages* and provides both visual and audible indicators for

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[51] Order No. 6043, at 129.

[52] *Id*.

[53] *Id*.

routing information."[54] Similarly, the Office of Inspector General wrote in 2017 that "carriers use MDDs on the street to *track package delivery in real time*," and that "[t]his tracking capability, known as *package visibility*, is essential for the U.S. Postal Service to be competitive and *increase package volume*."[55] Given that these scanner costs are clearly traceable to competitive products, this is yet another example of institutional costs that are associated with package deliveries.

(g) Other Examples

More generally, if the Commission prefers a gradualist component-by-component approach to identifying costs that are disproportionately associated with competitive products, year-over-year comparisons can be one method to identify candidate cost pools. An example is rural carrier costs, which have risen by $1.2 billion (or 15%) between FY2018 and FY2021.[56] The institutional costs in this cost segment rose by $680 million (or 13%) in the same time frame, an increase that cannot be explained by falling mail volumes, modest increases in delivery points, or inflation. The obvious implication is that it is associated with the growth of competitive products.

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[54] United States Postal Service, Office of Inspector General, Report Number: MI-AR-15-007, Passive Adaptive Scanning System Functionality and Labor Savings (Sep. 1, 2015), at 1, available at https://www.uspsoig.gov/sites/default/files/document-library-files/2015/MI-AR-15-007_0.pdf.

[55] United States Postal Service, Office of Inspector General, Report Number: CP-AR-17-008, Mobile Delivery Device Program (Apr. 28, 2017), at 1, available at https://www.uspsoig.gov/sites/default/files/document-library-files/2017/CP-AR-17-008.pdf.

[56] Rural carrier costs were $8.1 billion in FY2018 and $9.3 billion in FY2021. Institutional costs in this segment were $5.242 billion in FY2018 and $5.923 billion in FY2021. *See* USPS-FY18-43 and USPS-FY21-43.

Vehicle service driver costs—the labor costs associated with Postal Service employees who provide transportation that includes inter-station pickup and delivery, airport runs, delivery to firms, and street and firm collections—have also been increasing in recent years. These costs have risen $154 million (20%) between FY2018 and FY2021. Institutional costs in this segment have risen 9% in the same period.[57]

B. The Order Fails To Consider That The Status Quo Facilitates The Failure Of The Postal Service To Recover Its Costs

The Accountability Act requires the Commission, when setting the appropriate share, to consider "all relevant circumstances, including the prevailing competitive conditions in the market." 39 U.S.C. § 3633(b). One highly relevant circumstance that Order No. 6043 does not consider is the Postal Service's consistent losses of billions of dollars every year because of its failure to recover institutional costs.

When addressing cost attribution, the Commission pointed to appropriate share to address the problem.[58] Now when addressing appropriate share, the Commission points back to cost attribution and the possibility of future refinements.[59] But the fact remains that the Postal Service is falling well short of recovering all of its institutional costs. In a study of the Postal Service's finances, the Government Accountability Office

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[57] Vehicle service driver costs were $760 million in FY2018 and $914 million in FY2021. Institutional costs in this segment were $268 million in FY2018 and $293 million in FY2021. *See* USPS-FY18-43 and USPS-FY21-43.

[58] Order Concerning United Parcel Service, Inc.'s Proposed Changes to Postal Service Costing Methodologies (UPS Proposals One, Two, and Three) ("Order No. 3506"), Dkt. No. RM2016-2 (Sept. 9, 2016), at 123.

[59] *See* Order No. 6043, at 83-84.

found the Postal Service lost $78 billion from 2007 through 2019.[60] In the past two years alone, the Postal Service has lost another $14 billion,[61] bringing the total to roughly $92 billion.

Moreover, contrary to what the Commission has sometimes implied, the Postal Service's losses are *not* rooted solely in retiree benefits or workers' compensation. For one thing, the Postal Service has not needed to pay into the retiree health fund since 2012.[62] Further, the Postal Service's "*controllable*" losses—those that remain after removing adjustments to liabilities for workers' compensation and the amortization of other unfunded liabilities[63]—were roughly $2.4 billion in FY2021.[64] In other words, the Postal Service does not even recover its "controllable" costs, much less all of its costs. Given that the Postal Service consistently accrues more costs than revenues, even while it insists in its annual reports that *attributable costs* are generally covered, the

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[60] Government Accountability Office, *U.S. Postal Service: Congressional Action Is Essential to Enable a Sustainable Business Model*, available at https://www.gao.gov/products/gao-20-385.

[61] U.S. Postal Service, FY2021 10-K report, at 56.

[62] Postal Service Statement on Retiree Health Benefits Payment (Jul. 30, 2012), https://about.usps.com/news/national-releases/2012/pr12_0730rhbpayment.htm.

[63] *See, e.g.*, U.S. Postal Service, FY 2021 10-K report, at 22 (Nov. 10, 2021) ("We calculate controllable loss, a non-GAAP measure, by excluding the non-cash workers' compensation adjustments, as well as PSRHBF actuarial revaluation and amortization expenses and the amortization of unfunded pension liabilities. The variance in these expenses depends primarily on factors over which we have no control, such as changes in projected discount rates and inflation.").

[64] U.S. Postal Service Reports Fiscal Year 2021 Results (Nov. 10, 2021), https://about.usps.com/newsroom/national-releases/2021/1110-usps-reports-fiscal-year-2021-results.htm.

obvious explanation is that the Postal Service's losses are rooted in its failure to fully recover its *institutional costs*.[65]

Indeed, the 2018 Task Force on the United States Postal System concluded that the Postal Service has been "losing money for more than a decade and is on an unsustainable financial path," with a balance sheet reflecting $89 billion in liabilities as of FY2018, a number that has continued to grow since then.[66] As the Task Force noted, one reason for these losses is that the Postal Service's "cost allocation methodology is outdated" and "packages have not been priced with profitability in mind."[67] The Commission has essentially ignored these findings.

Because the Commission holds a very narrow approach to cost attribution, and because institutional costs are a residual category for all fixed and variable costs that are not attributed to products, the amount classified as "institutional" is enormous. As noted, in FY2021, the Postal Service classified 41% of all Postal Service costs, for a total of $33.6 billion, as institutional. Under the Commission's proposed formula for setting the appropriate share, competitive products must cover only 9.1% of those costs, even though competitive products contribute 45% of revenues and are responsible for 44% of attributable costs. This is unsustainable.

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[65] United States Postal Service Public Cost and Revenue Analysis Report, Dkt. No. ACR2020 ("FY 2020 PCRA"), at 2 (stating that Institutional Costs = Accrued Costs – Total Attributable Costs").

[66] Report from the Task Force on the United States Postal System (Dec. 4, 2018), at 2.

[67] *See, e.g.*, Report from the Task Force on the United States Postal System (Dec. 4, 2018), at 2, 5.

And while the Commission is required "[t]o allocate the total institutional costs of the Postal Service appropriately between market-dominant and competitive products,"[68] that is not happening. Indeed, the Commission has held the appropriate share to be covered by competitive products at fairly constant low levels, even as the share covered by market-dominant products has gone nearly straight down, as Figure 5 depicts.

Figure 5: Market-Dominant Contribution to Institutional Costs

The result is that the respective responsibility of the two lines of business do not add up to anywhere close to 100%, and adopting the proposed formula will simply guarantee that result for another five years. That formula will perpetuate the shortfall, by doing nothing to ensure that total institutional costs are covered by any products and

[68] 39 U.S.C. § 3622(b)(9).

doing nothing to ensure that the appropriate share assigned to packages reflects the tremendous growth of that business line.

The Commission argues that it does not need to set the appropriate share for packages at higher levels, even as the volume of packages the Postal Service delivers grows dramatically, because the Postal Service's incentive to maximize profits will ensure that packages recover as many institutional costs as are possible.[69] But it is illogical to assume that the Postal Service has the same incentives to maximize profits as private businesses do. And the Commission makes no effort to square its reliance on this assumption with the Postal Service's persistent lack of profit.[70]

The Commission's primary evidence for its assumption that the Postal Service is naturally inclined toward profit maximization is that competitive product contributions have "always exceeded the required amount" of institutional costs set by the Commission.[71] But that is circular reasoning, as the Commission could always set a benchmark low enough for the Postal Service to surpass. Indeed, that is exactly what the Commission has done. The fact that the Postal Service has exceeded the very low benchmark set by the Commission says nothing about profit maximization at all.

On the contrary, there is abundant evidence establishing that the Postal Service's business is not optimized for profit-maximization. This is not a criticism of the Postal Service; it is just what economics predicts will occur when government agencies

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[69] Order No. 6043, at 10.

[70] *See* U.S. Postal Service, FY 2021 10-K report, at 22 (Nov. 10, 2021) (noting FY2021 controllable loss as $2.386 billion and defining "controllable loss" to exclude unfunded pensions and other liabilities); *see also* U.S. Postal Service, FY 2020 10-K report, at 23 (Nov. 13, 2020) (noting FY2020 controllable loss as $3.752 billion).

[71] Order No. 6043, at 10.

are given a monopoly. Many economists have recognized that, while private companies have a strong incentive to set prices so as to maximize profits, governmental entities like the Postal Service have different incentives, such as the incentive to over-expand for non-economic reasons.[72] The Commission has never acknowledged this fundamental economic point, which should not be in serious dispute.

C. The Commission's Order Fails To Ensure A Level Playing Field And Fair Competition

The Commission notes that the purpose of the appropriate share requirement is to "ensure fair competition in the market for competitive postal services by protecting against any possibility that prices for the Postal Service's Competitive products (despite covering their attributable costs), might nevertheless be anti-competitively priced."[73] This is consistent with the Commission's longstanding recognition that "section 3633 and its required regulations are 'intended to ensure that the Postal Service competes

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[72] *See* Declaration of J. Gregory Sidak on Behalf of United Parcel Service, Institutional Cost Contribution Requirement for Competitive Products, Postal Regulatory Commission, Dkt. No. RM2017-1 (Jan. 23, 2016) ¶¶ 22–26; Reply Declaration of J. Gregory Sidak on Behalf of United Parcel Service, Institutional Cost Contribution Requirement for Competitive Products, Postal Regulatory Commission, Dkt. No. RM2017-1 (Mar. 9, 2017) ¶¶ 7–10; Petition of United Parcel Service, Inc. For The Initiation of Proceedings to Make Changes to Postal Service Costing Methodologies, Dkt. No. RM2016-2 (Oct. 8, 2015), at 2, 4, 19; Initial Comments of United Parcel Service, Inc. on Notice of Proposed Rulemaking to Evaluate the Institutional Cost Contribution Requirement for Competitive Products, Dkt. No. RM2017-1 (Jan. 23, 2017), at 26–27; Declaration of Dennis W. Carlton, Dkt. No. RM2017-1 (Mar. 9, 2017) at 7–10; *see also* J. Gregory Sidak, *Maximizing the U.S. Postal Service's Profits from Competitive Products*, 11 J. COMPETITION L. & ECON. 617, 662 (2015); David E.M. Sappington & J. Gregory Sidak, *Competition Law for State-Owned Enterprises*, 71 ANTITRUST L.J. 479, 500 (2003); David E.M. Sappington & J. Gregory Sidak, *Are Public Enterprises the Only Credible Predators?*, 67 U. CHI. L. REV. 271, 285–86 (2000) (explaining why a public enterprise has a greater incentive than a private firm to engage in predatory pricing); Andrei Shleifer, *State Versus Private Ownership*, 12 J. OF ECON. PERSPECTIVES 133, 135, 138, 148 (1998).

[73] Order No. 6043, at 6.

fairly in the provision of competitive products,'"[74] and that "[a] primary function of the appropriate share requirement is to ensure a level playing field in the competitive marketplace."[75] Given this undisputed purpose of the provision at issue, there is no question that the existence of a level playing field is a relevant circumstance the Commission must consider under Section 3633(b).

But the Commission instead considers only whether the Postal Service has committed anticompetitive conduct that would be actionable under the antitrust laws. For instance, the Commission notes it is "not persuaded that the Postal Service will be motivated to engage in anticompetitive pricing of Competitive products in the future."[76] The Commission similarly claimed in past orders that the lack of any "antitrust-related action" against the Postal Service shows that there are no concerns about the Postal Service competing unfairly.[77]

The Accountability Act's concern with fair competition, however, extends beyond the set of unlawful conduct covered by the Sherman Act. The Accountability Act is concerned about a government agency expanding to compete into the private sector, which is not a concern addressed by the Sherman Act. Consider the example of predatory pricing, which the Commission noted.[78] Proving such a claim in court

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[74] *See, e.g.*, Order No. 3506 at 121 (quoting S. REP. NO. 108-318, at 19 (2004)); *see also* Order Reviewing Competitive Products' Appropriate Share Contribution to Institutional Costs ("Order No. 1449"), Dkt. RM2012-3 (Aug. 23, 2012), at 13 (Commission recognizing that a "primary function" of the appropriate share requirement is to "ensure a level playing field in the competitive marketplace.").

[75] Order No. 1449 at 13.

[76] Order No. 6043, at 93.

[77] Order No. 4402, at 8.

[78] Order No. 6043, at 59.

requires proof of such elements as the possession of monopoly power (or the imminent risk of obtaining monopoly power). *United States v. Grinnell Corp.*, 384 U.S. 563, 570 (1966) (listing elements of monopolization claim). It may also require proving that there is a dangerous probability that the alleged monopolist will be able to recoup its investment in below-cost prices in the long run by, for example, permanently driving all competitors out of the market and then raising prices to monopoly levels. *See Weyerhaeuser Co. v. Ross-Simmons Hardwood Lumber Co.*, 549 U.S. 312, 318-19 (2007).

Congress's fair competition concerns in the Accountability Act were not limited to such extreme scenarios. Rather, Congress wanted to prevent the Postal Service from using its status as a government agency with a statutory monopoly over letter mail to compete unfairly against the private sector *at all*—in the short and long run. Under the Accountability Act, the Commission is supposed to ensure that the Postal Service must "compete on a level playing field, under many of the same terms and conditions as faced by its private sector competitors, *albeit with stronger controls, oversight, and limitations in recognition of its governmental status*."[79]

Congress directed the Commission to ensure that the Postal Service's package delivery business must stand on its own, and cover all of its associated costs. The formula proposed in the Order does nothing to further these objectives. The Commission never considers whether the Postal Service is able to avoid covering costs

[79] H.R. REP. NO. 109-66, at 44 (2005). The D.C. Circuit has noted that "Congress wished to 'ensure that the Postal Service competes fairly,' that is, without using revenues from market-dominant products subject to its monopoly power to defray costs competitive products would otherwise have to be priced to cover." *United Parcel Serv.*, 890 F.3d at 1055 (quoting S. REP. NO. 108-318, at 15 (2004)).

that private sector companies must recover. Instead of addressing that directly, the Commission claims that the market for postal services is "healthy and competitive," relying on the existence of "surging demand, the development of 'co-opetition' between competitors in the market, steady increases in revenue and profit for all competitors, and growth in the Postal Service's market share and Competitive product volume."[80]

But none of these factors demonstrates that the Postal Service's package business is operating on a level playing field or recovering all of its associated costs. Surging demand alone says nothing about balanced competition, only that consumers are increasingly willing to pay for delivery services, especially in light of the growing demand for deliveries during the COVID-19 pandemic.[81] Similarly, cooperation and joint ventures between the Postal Service and private companies like UPS and FedEx do not necessarily demonstrate healthy competition, and say nothing about whether the Postal Service is accounting for costs in the same manner as private competitors.

The Commission's market-share analysis likewise fails to demonstrate a level playing field. The Commission claims that the "Postal Service's competitors still control

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[80] Order No. 6043, at 98.

[81] *See* United States Postal Service, *Delivering For America: Our Vision And Ten-Year Plan To Achieve Financial Sustainability And Service Excellence* (Mar. 23, 2021), at 20-21 & n.27, available at https://about.usps.com/what/strategic-plans/delivering-for-america/assets/USPS_Delivering-For-America.pdf (noting that "package volume increased due to e-commerce and social distancing" and that "package volume has substantially increased in response to the COVID-19 pandemic. Specifically, [OIG] note[s] that "national package volume from March through May 2020 increased by about 466 million (30%) when compared to the same period last year" and that "[t]he nationwide package volume during May surpassed the package volume of the holiday peak season during October – December 2019 by about 21.6 million packages.").

approximately 78% of the market for competitive services."[82] But the Commission's 78% figure refers to *revenues*, which systematically underestimate the Postal Service's market share to the extent the Postal Service's packages are priced below market. If the market is instead measured in terms of units shipped, which permits a more apples-to-apples comparison, the Postal Service delivered 7.3 billion packages in 2020,[83] exceeding the 6.3 billion for UPS[84] and 4.6 billion for FedEx.[85]

This highlights that, in just a few short years, the Postal Service rapidly grew to overtake UPS and FedEx in the volume of packages delivered to American homes. The Postal Service did this during a period when the Commission set the appropriate share at an artificially low level, and when the Postal Service failed to recover all of its institutional costs. Far from proving that the playing field has been level, this strongly indicates that the Postal Service has benefitted from not covering its full package costs.

The Commission suggests that the incremental growth of the appropriate share from 5.5% in FY2007 to 9.1% in FY2021 indicates that the "formula-based approach has functioned as intended."[86] But this increase was extremely small—just a 3.6 percentage point increase over 14 years, despite the exponential growth in packages

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[82] Order No. 6043, at 107.

[83] United States Postal Service, A *Decade of Facts and Figures*, https://facts.usps.com/table-facts (7.3 billion packages delivered in 2020).

[84] United Parcel Service, *Corporate Fact Sheet* (Aug. 24, 2021) https://about.ups.com/us/en/our-company/global-presence/corporate-facts.html (6.3 billion packages and documents delivered in 2020).

[85] FedEx, *Company Structure*, https://www.fedex.com/en-us/about/company-structure.html (4.6 billion packages delivered in 2020).

[86] Order No. 6043, at 106-09.

(approximately 345%) during that same period.[87] Conversely, the Commission also claims that there are "risks" associated with setting an appropriate share that is "too high,"[88] because a "price floor set too high could harm the Postal Service's ability to compete by preventing the Postal Service from being able to reduce prices when it would be economically prudent to do so."[89] But this hypothetical fear is dramatically overstated. The fact that the Commission's formula yields only a 9.1% appropriate share—which is *less than a quarter* of the actual competitive contribution to institutional costs (39.2%)—only proves that the formula is designed to yield an economically irrelevant rate and fails to take into account the relevant factors affecting package costs.[90]

Fundamentally, the Order fails to consider the key question: Whether a too-low appropriate share provides the Postal Service with an unfair advantage. Private-sector companies bear costs identical to those the Postal Service classifies as "institutional"—including management salaries, costs of maintaining a multi-product delivery network, real estate maintenance costs, and variable "common" costs driven by more than one product. Private-sector competitors, however, would fail to have a viable business if they cannot generate sufficient revenues to cover *all* of these costs. When the Postal

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[87] The 2008 RPW report indicates that FY2007 volumes for shipping services was 1.63 billion pieces, while FY2021 competitive product volumes were 7.25 billion pieces. 7.25/1.63 – 1 = 345%.

[88] Order No. 6043, at 61.

[89] *Id*. at 61.

[90] *See, e.g.*, United States Postal Service FY 2021 Annual Compliance Report, Dkt. No. ACR2021 (Dec. 29, 2021), at 88.

Service is required to cover only a small amount of these costs with competitive-product revenues, then that plainly is not the level playing field that Congress intended.

D. The Commission's Order Fails To Prevent Subsidization

Under 39 U.S.C. § 3633(a)(1), the Commission must "prohibit the subsidization of competitive products by market-dominant products." The failure to address whether the Postal Service is accounting for costs of competitive products in a manner consistent with private companies, and thereby protects fair competition, constitutes a failure to consider whether market-dominant products are effectively subsidizing competitive products. The Commission currently purports to address subsidization solely in its consideration of incremental costs, *i.e.*, the Commission claims that no subsidization exists so long as competitive products cover their incremental costs. But the Accountability Act does not suggest any such incremental-cost limitation. Rather, it prohibits subsidization. And such subsidization can occur where market-dominant products cover more than their fair share of institutional costs, especially given the very conservative test the Postal Service uses for determining which costs are incremental, thereby deeming almost half of all costs institutional.

Thus, under Section 3633(a)(1), the Commission should prohibit the subsidization of competitive products through improper allocation of institutional costs. And, at a minimum, the subsidization problem is a relevant issue that the Commission must consider under Section 3633(a)(3). Simply put, if the Commission will consider subsidization only through incremental-cost allocation under Section 3633(a)(1), then it should address the subsidization through institutional-cost allocation under Section 3633(a)(3).

All of the arguments advanced by the Commission to justify its decision to absolve competitive products from responsibility for paying a meaningful share of institutional costs stem from its claimed inability to apportion causal responsibility for those costs between market-dominant and competitive products. However, it is undoubtedly the case that these two sets of products are *collectively* responsible for causing the *entirety* of institutional costs, and as such, should be collectively responsible for generating the revenues for covering those costs.

II. THERE ARE ECONOMICALLY SOUND WAYS FOR SETTING THE APPROPRIATE SHARE THAT TAKE ACCOUNT OF THE RELEVANT FACTORS AND WILL ENSURE A LEVEL PLAYING FIELD

Contrary to the Commission's claim, there are "economically sound" ways to take into account all relevant statutory factors, including the costs "uniquely or disproportionately" associated with competitive products, in setting an appropriate share percentage that comports with the Accountability Act.

A. Setting Appropriate Share By Reference To Attributable Cost Shares

The most straightforward way to set the appropriate share in compliance with the Accountability Act is to set the share at or around the same level as the share of overall attributable costs that are associated with competitive products. As noted above, under the Commission's cost-accounting system, the Postal Service must attribute to its products all costs that can be shown as caused exclusively by a single product. In FY2021, the Postal Service attributed about $48.4 billion of its costs. Of those attributed costs, approximately 56.5% were attributed to market-dominant products and 43.5% were attributed to competitive products.[91] The most straightforward way to set

[91] USPS-FY21-1 FY2021 Public Cost and Revenue Analysis ("PCRA") Report, at 3. This would be only a modest and justified increase from competitive products'

the appropriate share of institutional costs to be covered by competitive products is to set the share at or about this same percentage: 43.5%.

As discussed below, this approach also adheres most faithfully to the Accountability Act. The Commission's reasons for not adopting it, on the other hand, lack merit. And to the extent the PRC is concerned that this shift would be too drastic (despite competitive products' actual contribution to institutional costs being 39.2% in FY2021), the change could be phased in over a period of several years.

1. *Cost Recovery, Subsidization, And Fair Competition*

Setting the appropriate share at or around the same level as the share of overall attributable costs that are associated with competitive products best fulfills the statutory mandates of recovering costs, avoiding subsidization, and protecting fair competition. As discussed above, even though the Accountability Act requires the Commission "[t]o allocate the *total institutional costs* of the Postal Service appropriately between market-dominant and competitive products," 39 U.S.C. § 3622(b)(9) (emphasis added), that does not occur because the collective responsibilities of those product lines are consistently failing to cover 100% of institutional costs.

In contrast, setting the appropriate share in terms of the respective share of attributable costs will result in the math adding up to 100%, as the Accountability Act requires. Each business (market-dominant and competitive) will shoulder its share of the total costs, as estimated by those percentage of attributable costs that the Postal Service calculates. This proposed approach is far more rigorous and economically

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actual contribution to institutional costs (39.2%). *See, e.g.*, United States Postal Service FY2021 Annual Compliance Report, Dkt. No. ACR2021 (Dec. 29, 2021), at 88.

sound than the formula the Commission proposes. According to the Commission itself, the attributable-cost analysis is the best means of determining the percentages of attributable costs to assign to market-dominant and competitive products. The Commission claims that, for institutional costs, there is no meaningful way to divide up the institutional costs between the products because institutional costs are supposedly necessary for all of the products. If that were true, then the proper approach is simply to extend the Commission's rigorous analysis of attributable costs to institutional costs, not to assume (contrary to all evidence and logic) that competitive products need cover only a minimal share of institutional costs.

This approach also would ensure that competitive products recover their fair share. Simply put, nothing about the nature of institutional costs makes them more closely tied to market-dominant products, or that would explain why competitive products do not need to cover them. Indeed, as discussed above, there is overwhelming evidence of substantial institutional costs uniquely or disproportionately associated with competitive products. Under these circumstances, a private company would allocate at least the same percentage of institutional costs as they would attributable costs to determine the profitability of the products at issue. To ensure a level playing field, and to avoid subsidization, the Commission should do the same.

Contrary to the Commission's assumption, this approach does not constitute "fully distributed costing."[92] Fully distributed costing occurs when all costs are assigned to *individual products*, leaving a business no latitude in how it recovers its total costs

[92] Order No. 6043, at 85-86.

across product lines.[93] Here, the proposal is not to assign all costs to individual products, but rather for the Commission to ensure fair competition and fiscal responsibility. Asking the Postal Service to cover all of its institutional costs between market-dominant and competitive products is not fully distributed costing—it is nothing less than the basic fiscal responsibility mandated by the Accountability Act.

Certainly, the Commission might believe that this is not the ideal economic solution if the Postal Service were a *private company* with two different product lines. The Commission appears to consider it economically advantageous for a company to have complete freedom to recover costs as between two different product lines, and that a pre-set allocation is economically unwise. But the Commission does not regulate a private company—it regulates a *government agency* where one business has a statutory monopoly. Because of that unique status, Congress intended to subject the Postal Service to "*stronger controls*, oversight, and limitations" than the private sector.[94] To the extent that allocation of total institutional costs between two business lines is more than what a private company should do, this measure constitutes one of the stronger controls that the Commission is supposed to implement.

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[93] United States Postal Service, Office of Inspector General, Report Number: RARC-WP-12-016, Costs for Better Management Decisions: CRA Versus Fully Distributed Costs (Sept. 17, 2012), at 1 n.3, available at https://www.uspsoig.gov/sites/default/files/document-library-files/2015/rarc-wp-12-016_0.pdf.

[94] H.R. REP. NO. 109-66, at 44 (2005) (emphasis added). The D.C. Circuit has noted that "Congress wished to 'ensure that the Postal Service competes fairly'—that is, without using revenues from market-dominant products subject to its monopoly power to defray costs competitive products would otherwise have to be priced to cover." *United Parcel Serv.*, 890 F.3d at 1055 (quoting S. REP. NO. 108-318, at 15 (2004)) (internal citations omitted).

Furthermore, the Commission's objection to fully distributed costing rests on a double standard. On one hand, the Commission states that "arbitrarily assigning shares or proportions of costs to goods, is a form of fully distributed costing as it relates to the Postal Service's Competitive products."[95] But on the other hand, the Commission itself arbitrarily assigns institutional costs to goods, because its proposed formula is arbitrary in many respects: It relies on an arbitrary seed value (5.5%), arbitrary components, and arbitrary weights. Simply put, the Commission is already distributing costs; UPS is requesting only that the Commission allocate *total* institutional costs, as opposed to only some of them.

Finally, the Commission's objection to fully distributed costing fails to take account of the Postal Service's year-over-year losses. It is one thing to say that the Postal Service should have freedom on how to allocate its cost-recovery obligations *when it is meeting those obligations*. It is quite another to defend the ability of the Postal Service not to recover its costs at all.

2. *Accounting For Costs Uniquely Or Disproportionately Associated With Competitive Products*

Setting the appropriate share in terms of the respective share of attributable costs also adheres more faithfully to the Accountability Act than the status quo because it takes into account those costs that are uniquely or disproportionately associated with competitive products. As the D.C. Circuit explained: "[T]he Accountability Act clearly requires the Commission to consider *any* costs uniquely or disproportionately associated with competitive products at the time it reviews its appropriate share

[95] Order No. 6043, at 85.

determination under § 3633(a)(3). This includes, but is not limited to, any costs fitting that description that the Commission may have already considered when it promulgated regulations under § 3633(a)(1) or § 3633(a)(2)." *United Parcel Serv.*, 955 F.3d at 1050.

For instance, if a cost has a reliably identified causal relationship with a competitive product, as required for attribution under § 3633(a)(2), then it necessarily meets the lower standard of merely having a unique or disproportionate *association* with competitive products under § 3633(b). Thus, the Order's professed concern about the Commission's inability to consider costs uniquely or disproportionately associated with competitive products in an economically sound manner does not apply to those costs already deemed to be attributed in an economically sound manner in applying § 3633(a)(2).

Instead, the Order's justification for refusing to consider the costs attributed to competitive products in setting the appropriate share is the untenable position that "[b]ecause all attributable costs are already included in the Competitive product price floor under 39 U.S.C. § 3633(a)(3), the Commission declines to further account for them as part of the appropriate share."[96]

The D.C. Circuit rejected exactly the same argument before: "The simple point here is that the Commission erred in concluding that it had discharged its responsibility to consider *any* costs uniquely or disproportionately associated with competitive products by virtue of the fact that it had already considered these costs when setting the

[96] Order No. 6043, at 8; *see also id*. at 55-56 ("[A]ttributable costs are already 'considered' by the Commission as part of the appropriate share determination because they are already included in the calculation of the price floor set by 39 U.S.C. § 3633(a)(3).").

price floor under § 3633(a)(2)." *United Parcel Serv.*, 955 F.3d at 1050. And it mandated that "[o]n remand, the Commission must consider all costs uniquely or disproportionately associated with competitive products in setting the appropriate share, *even if it has already accounted for those costs under § 3633(a)(1) and (a)(2)*." *Id.* at 1051 (emphasis added). Thus, the Commission's continued refusal to consider these costs—simply because they are also considered in applying the other, independent statutory requirements of § 3633(a)(1) and (a)(2)—conflicts directly with the D.C. Circuit's mandate.

The Commission's rationale for ignoring these costs does not withstand scrutiny. According to the Order, "Double-counting these costs as part of the price floor of § 3633(a)(3) would be economically unsound and would harm the Postal Service and its competitive business." Order No. 6043, at 72-73. But the Commission can readily "consider" costs attributed to competitive products without double-counting them. Specifically, the Commission can use the *percentage* of costs attributed to competitive products (as compared to costs attributed to market-dominant products) as a reasonable estimate of the percentage of institutional costs that likewise should be covered by competitive products. In that way, the Commission would *consider* the costs addressed in § 3633(a)(1) and (a)(2), as the Accountability Act requires, without adding them twice.

The Commission errs in its suggestion that its formula implicitly considers these costs. The Order states that "costs attributable to Competitive products are … used to calculate one of the primary terms of the formula, the Competitive Contribution Margin." Order No. 6043, at 73. But this statement distorts how the formula actually works: The

formula does not use the Competitive Contribution Margin *on its own*. Rather, it considers only the *change* in Competitive Contribution Margin year to year. *Id.* at 26. And considering only this change in the margin means this variable does not consider the costs themselves. This is apparent because if costs attributed to competitive products are a large number or a small number does not matter; the only thing that matters is whether and how much it has changed from the prior year. Furthermore, even for this change, the formula treats an increase in attributable costs relative to revenue as a *negative* in the determination of the appropriate share percentage.

Simply put, if costs attributable to competitive products increase and other factors are held constant, the appropriate share percentage under the formula *decreases*. Thus, the only supposed consideration of costs uniquely or disproportionately associated with competitive products provided by the Commission's formula—to the extent they are reflected in costs attributed to competitive products—is that an *increase* in such costs would mean a *lower* price floor for competitive products. That squarely conflicts with what Congress intended.

B. Setting The Appropriate Share By Reference To The Contribution Of Market-Dominant Products

Another straightforward way to comply with the Accountability Act would be to set the appropriate share to cover whatever share of institutional costs are *not* covered by market-dominant products. Put differently, the appropriate share would be calculated as 100% of institutional costs *minus* the market-dominant contribution. The Postal Service would have flexibility to cover its institutional costs however it sees fit, so there could be no possible claim that this constitutes fully distributed costing. It would just

mean that the Postal Service's two business lines are collectively responsible for total institutional costs, as the Accountability Act mandates.

As shown in the table below, this approach would also have the common-sense result of having the appropriate share increase as the share of competitive products increases, and as the contribution from market-dominant products declines.

Table 1: Market-Dominant Contribution to Institutional Costs, FY2007-FY2021

Fiscal Year	Institutional Costs	MD Revenue	MD Attributable Cost	MD Contribution ($M)	MD Contribution (%)	Alternate Appropriate Share
	[1]	[2]	[3]	[4]	[5]	[6]
2007	31,476	67,583	41,016	26,567	84.4%	15.6%
2008	32,219	65,788	39,035	26,752	83.0%	17.0%
2009	28,907	59,782	36,830	22,952	79.4%	20.6%
2010	34,006	57,729	35,319	22,409	65.9%	34.1%
2011	29,554	56,223	34,572	21,651	73.3%	26.7%
2012	40,625	52,826	32,145	20,681	50.9%	49.1%
2013	33,149	51,355	29,407	21,947	66.2%	33.8%
2014	34,187	51,590	28,205	23,385	68.4%	31.6%
2015	33,815	51,651	28,283	23,368	69.1%	30.9%
2016	36,363	50,893	28,261	22,632	62.2%	37.8%
2017	30,872	47,788	28,026	19,762	64.0%	36.0%
2018	30,724	46,434	28,427	18,007	58.6%	41.4%
2019	35,199	45,695	28,891	16,804	47.7%	52.3%
2020	35,986	41,820	26,921	14,898	41.4%	58.6%
2021	33,634	41,634	27,258	14,376	42.7%	57.3%

Sources and Notes:
[1] - [4]: USPS-LR-1 for Fiscal Years 2007-2021. The 2007 CRA does not separate Competitive vs Market Dominant cost. We estimate this by subtracting Priority and Express Mail from Total Mail and Services.
[5]: [4] / [1]
[6]: ([1] - [4]) / [1].

C. The Appropriate Share Can Also Be Informed By An Analysis Of Stand-Alone Costs

Another way that the Commission could ensure that the appropriate share is set in a rigorous and meaningful fashion would be to model the stand-alone costs of the Postal Service's market-dominant business (*i.e.*, what the Postal Service's business would look like in the absence of competitive products). Such a methodology would enable the Postal Service to isolate—via simple subtraction—those costs uniquely or disproportionately associated with competitive products. That methodology could then inform the appropriate share percentage. For example, if a stand-alone cost model showed that the Postal Service could cut its institutional costs in half if it did not deliver any packages, then that would provide compelling evidence that half of all institutional costs are meaningfully associated with competitive products.

The Commission claims that "[n]o methodology exists that would permit the Commission to determine which portion of institutional costs are unattributed inframarginal costs, *i.e.,* the inframarginal costs not calculated as part of incremental costs." Order No. 6043, at 84. A stand-alone cost methodology would allow the Commission to do precisely this. Indeed, it is well established in regulatory economics that, in order to avoid cross-subsidy, a regulated provider of multiple products must assure that each product (and each group of products) generates sufficient revenue to cover the difference between the total cost of operating the business, and the stand-alone cost needed to provide the other services.

The stand-alone cost test is a practical tool used by regulatory bodies to assess the reasonableness of prices charged by regulated entities. The test was initially

established by the Interstate Commerce Commission,[97] the predecessor of the Surface Transportation Board, the body currently charged with protecting rail shippers from efforts by U.S. railroads to charge economically unreasonable and excessive rates. To challenge a rate that it regards as excessive, a shipper must demonstrate that this rate exceeds what would be required to enable a hypothetical efficient entrant to purchase, construct and operate the facilities needed to accommodate that traffic to which the challenged rate applies.[98] Over the years many such challenges have been mounted, and many shippers have in this way achieved reductions in the rates they pay.

In the postal context, a stand-alone cost test would reveal which aspects of the Postal Service's operations are the result of competitive products. The Postal Service unquestionably would be able to shed large volumes of costs if it did not deliver packages. If the Postal Service did not have competitive products, it would be able to radically restructure its operations, particularly in light of the historic volume declines in letter mail over the past two decades. There would be no "peak season" crunch to deliver millions of packages around the holidays, allowing the Postal Service to shed many millions in costs for that purpose alone. Analyzing the question in this way would thus allow the Commission to estimate the magnitude of costs that having a package delivery business adds to the enterprise as a whole.

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[97] Coal Rate Guidelines, 1 I.C.C.2d 520, 542-48 (1985).

[98] Because of the complexity and expense of mounting a stand-alone cost (SAC) based challenge to a rail rate, the Surface Transportation Board has in recent years instituted alternative rate review methods aimed at smaller shipments. However, the SAC test remains the relevant method for challenging rates applicable to large traffic movements.

The Postal Service has increased investments in its package delivery business, and many of those investments would not exist but for its growing focus on competitive products. For instance, to accommodate the growing number of packages it transports, the Postal Service has made significant investments in new machines designed for sorting packages.[99] Further, because transportation of packages requires more cargo space, the Postal Service has purchased larger delivery vehicles than previously required.[100] And the Postal Service also hires more workers to handle packages, especially during the December peak when package volume is at its highest.[101]

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[99] United States Postal Service, *Delivering For America: Our Vision And Ten-Year Plan To Achieve Financial Sustainability And Service Excellence* 28 (Mar. 23, 2021) ("As we expand our role in the e-commerce marketplace, package volume will continue to grow. We will deploy and maintain a diverse suite of package sorters and material handling equipment to optimize processing throughputs. We are in the process of procuring and deploying more than 185 new package sorters as we continue to adjust to the growing package demand."); *see also* Jory Heckman, *USPS sees more on-time holiday deliveries, despite surge in COVID-19 quarantines*, FEDERAL NEWS NETWORK (Dec. 27, 2021), https://federalnewsnetwork.com/agency-oversight/2021/12/usps-sees-more-on-time-holiday-deliveries-despite-surge-in-covid-19-quarantines/ ("USPS also installed 112 new package sorting machines and leased 13 million square feet of additional space at more than 100 locations to deal with an ongoing surge in packages. These investments allow USPS to process an additional 13 million packages every day.").

[100] United States Postal Service, *U.S. Postal Service Awards Contract to Launch Multi-Billion-Dollar Modernization of Postal Delivery Vehicle Fleet*, NATIONAL NEWS (Feb. 23, 2021) https://about.usps.com/newsroom/national-releases/2021/0223-multi-billion-dollar-modernization-of-postal-delivery-vehicle-fleet.htm ("The vehicles will also have increased cargo capacity to maximize efficiency and better accommodate higher package volumes stemming from the growth of eCommerce."); *see also* Thomas Gryta, *New Mail Trucks Are Finally Coming, but Don't Expect All Electric Vehicles*, WALL ST. J. (Feb. 25, 2021) https://www.wsj.com/articles/new-mail-trucks-are-finally-coming-but-dont-expect-all-electric-vehicles-11614260671?page=1 (noting initial investment of $482 million to purchase as many as 165,000 brand-new delivery vehicles).

[101] United States Postal Service, *A Sustainable Path Forward: Report From The Task Force On The United States Postal Service* 5 (2018) ("Given the expected growth in package delivery services, personnel costs are expected to continue to increase in future years … ."); Paul Bersebach, *Now hiring: U.S. Postal Service seeks mail carriers starting at $18.92*, ORANGE COUNTY REGISTER (Jan. 4, 2022).

There can be no real dispute that packages play a very large role in the Postal Service's business operations today. The Postal Service's only claim to the contrary is that competitive products make up "just four to five percent of total volume,"[102] but that metric is misleading because it obscures how much bigger and bulkier packages are, and how much more workload and costs they generate to carry. In the newly-issued ACR2021 docket, for example, competitive products account for 43.5% of the Postal Service's attributable costs.[103] Other ACR metrics similarly indicate competitive products make up a large proportion of Postal Service workload, costs, and revenues. For example, depending on the quarter, competitive products can account for large shares of the workload on the most important cost pools in highway cost transportation: Up to 56% of cubic foot miles on regular Intra-SCF routes and 63% of cubic foot miles on regular Inter-SCF routes.[104] Competitive products also account for roughly 93% of

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https://www.ocregister.com/2022/01/04/now-hiring-u-s-postal-service-seeks-mail-carriers-starting-at-18-92/ ("The USPS hired 100,000 people nationwide in 2021, including carriers, mail processors, drivers and management."); United States Postal Service, *U.S. Postal Service Now Hiring Seasonal Employees Nationwide in Preparation for 2021 Holiday Season*, NATIONAL NEWS (Sept. 8, 2021), https://about.usps.com/newsroom/national-releases/2021/0908-usps-now-hiring-seasonal-employees-nationwide.htm#:~:text=8%2C%202021-,U.S.%20Postal%20Service%20Now%20Hiring%20Seasonal%20Employees,Preparation%20for%202021%20Holiday%20Season&text=WASHINGTON%2C%20DC%20%E2%80%94%20The%20U.S.%20Postal,for%20mail%20and%20package%20deliveries. ("The U.S. Postal Service is currently hiring for more than 40,000 seasonal positions as preparations continue for the 2021 winter holidays, the agency's peak season for mail and package deliveries.").

[102] Initial Comments of the U.S. Postal Service on UPS Proposal One, RM2020-9 (Dec. 15, 2020) at 33.

[103] USPS-FY21-1 FY2021 Public Cost and Revenue Analysis ("PCRA") Report.

[104] USPS-FY21-32 FY2021 CRA "B" Workpapers (Public Version). See the "Inputs – Keys" worksheet in CS14-Public-FY21.xlsx. SCF refers to sectional center facilities, and the territories they serve.

the regular special purpose route ("SPR") delivery distribution key and 99% of the Sunday SPR delivery distribution key.[105]

Growth in packages has allowed the Postal Service to avoid the difficult decisions of how to right-size its network for current market-dominant mail volumes. This means that the Commission's current approach to measuring incremental costs is almost certainly biased downwards relative to the suggested stand-alone cost test. Indeed, the current methodology for calculating incremental costs *assumes* that package deliveries have *no effect* on the structure of the Postal Service's operations and instead treats the Postal Service's operations as virtually fixed. That is because the Postal Service uses a constant elasticity assumption for estimating the incremental costs of packages. The Postal Service does not dispute the explanation of its own economist, Professor Bradley, that "it is not clear that the [constant elasticity] approximation is accurate at volumes which are very different from the levels at which the underlying functions are evaluated."[106]

Likewise, the Commission has found that the constant elasticity approximation is "unsupported when used for volume levels substantially outside the range of actual experience."[107] Thus, the incremental-cost test looks only at small changes in volume,

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[105] USPS-FY21-32 FY2021 CRA "B" Workpapers (Public Version). See the "7.0.6.6" and "7.0.9" worksheets in CS06&7-Public-FY21.xlsx.

[106] Seasonal Increases in U.S. Postal Service Costs Driven by Competitive Products, Dkt. No. RM2020-9 (filed Sept. 28, 2020) at 35.

[107] Order Concerning United Parcel Service, Inc.'s Proposed Changes to Postal Service Costing Methodologies (UPS Proposals One, Two, and Three) ("Order No. 3506"), Dkt. No. RM2016-2 (Sept. 9, 2016), at 8; *see also id.* at 42 (explaining that the incremental cost model is only reliable "in a very small range of a component's cost curve where the constant elasticity assumption has been empirically verified based on observed volumes").

at the margin, not large changes in volume that would show how operations would be shifted in the absence of competitive products. And those operational costs that would go down in the absence of competitive products are, by definition, uniquely or disproportionately associated with competitive products.

The Commission takes an extremely short-term view of how Postal Service costs change in response to changes in volume.[108] In study after study, the tendency has been to take the current structure and organization of the Postal Service as given, and to focus the analysis on the narrow questions of how, within the structure, costs change in response to small changes in volume.[109] Rarely, if ever, do these cost studies consider how that structure—what activities are carried out, what facilities are maintained and operated, or what machinery and processing equipment is in place—might be driven by changes in volume. Because of its narrow view of cost causation, the Commission systematically ignores the costs associated with changes in the structure and organization of Postal Service operations, as well as the startup costs incurred when temporary labor is hired, facilities are leased, or contractors are engaged in response to short term spikes in volume.

The Order does not directly address stand-alone costs or make any attempt to model them, although UPS has repeatedly urged the Commission to conduct this

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[108] *See, e.g.*, Order on Analytical Principles Used in Periodic Reporting (Proposal Six) ("Order No. 6096"), Dkt. No. RM2020-13 (Jan. 9, 2022), at 11; *see also* "On the Estimation of a Top-Down Model for City Carrier Street Time," Prof. Michael D. Bradley, https://www.prc.gov/docs/120/120740/bradley%20report.rev.1.21.22.gray.pdf.

[109] *See, e.g.*, "On the Estimation of a Top-Down Model for City Carrier Street Time," Prof. Michael D. Bradley, https://www.prc.gov/docs/120/120740/bradley%20report.rev.1.21.22.gray.pdf.

inquiry.[110] Instead, the Commission treats any attempt to look beyond short-run incremental costs as categorically not "economically sound" and therefore impermissible. For example, the Commission states that institutional "costs are caused by the existence of a system in which both Market Dominant and Competitive products are handled s*imultaneously*, and consist of the portion of costs that cannot be separately identified and linked to either Market Dominant or Competitive products," both sets of products "rel[y] on the existence of this system," and "attempting to allocate such costs … would lack justification from an economic and cost-accounting perspective, as the allocation of costs would be arbitrary." Order No. 6043, at 83. But the assertion that market-dominant and competitive products are handled simultaneously says nothing about whether some costs are uniquely or disproportionately associated with competitive products.

Similarly, the Commission errs in arguing that "there is no way for the Commission to reasonably separate a cost component's institutional costs into unattributed inframarginal costs and fixed costs categories and then further segregate the unattributed inframarginal costs into those that are *meaningfully* related to the provision of Competitive products." Order No. 6043, at 84. This assumes that the Postal Service must separate out its institutional costs in order to measure costs uniquely or disproportionately associated with competitive products. That is not required. The best solution is to measure stand-alone market-dominant costs first, so the Commission will have a realistic estimate of the scope of costs uniquely or

[110] Order No. 6043, at 58.

disproportionately associated with competitive products—*i.e*., the difference between actual, real-world costs and the market-dominant stand-alone costs.

D. Identifying Costs Uniquely Or Disproportionately Associated With Competitive Products Via Regression-Based Approach

Finally, the Commission could also identify costs uniquely or disproportionately associated with competitive products by using a regression-based approach. The Commission could then use those results to inform its appropriate share determination. Regression-based approaches have been used in numerous cases, including the City Carrier dockets RM2015-7 and RM2020-9.

UPS's external consultants have developed a regression-based approach here for identifying costs that are disproportionately associated with competitive products.[111] This approach combines information from the Postal Service's annual compliance filings with information on costs, volumes, and mail mix made available by the Postal Service at either the monthly or quarterly level. The analysis investigates the extent to which temporal variation in unattributed costs can be explained statistically by temporal variation in the mail volumes delivered by the Postal Service.

The data relied upon covers a period over the last eight years. This period is characterized by a long-term secular decline in market-dominant mail volumes and a long-term rise in competitive product mail volumes. However, there is also substantial seasonal variation in market-dominant and competitive product mail volumes over this time. This variation allows UPS's consultants to identify the extent to which costs—

[111] *See* Technical Appendix in Support of UPS Initial Comments in Dkt. No. RM2022-2, Dkt. No. RM2022-2 (Feb. 25, 2022), at Section IV.

above and beyond those directly attributed to the various classes of mail—are associated with each type of mail.

The analysis begins by defining the residual costs that will serve as the dependent variable. While accrued costs within various components and cost pools are reported at the monthly level, the Postal Service does not generally calculate volume variable, attributable, or institutional costs with the same frequency. Rather, cost attribution is performed on an annual level, as part of the Annual Compliance Review process. One of the outcomes of that process is a set of variabilities, defined as the shares of the component or cost pool that are treated as variable (and end up as volume variable costs). These variabilities are generally fairly stable over time, though there are occasional shifts due to updates to the analytical principles used in Postal Service costing, in response to improvements in methodology or data availability.

While the Postal Service's full costing model cannot be replicated at the monthly level, the Postal Service's own expert has explained that a monthly volume variable cost for a component can be computed by multiplying the component's annual variability by its monthly accrued costs.[112] This method permits a decomposition of accrued costs into volume variable and non-volume variable portions. The latter forms the residual cost measure whose association with various measures of volume has been tested. In constructing this variable, UPS's external consultants have applied cost category wide

[112] *See*, *e.g.,* "Seasonal Volume Variations and Product Costing", Prof Michael D. Bradley, attached to Response of The United States Postal Service to Order No. 5687 Regarding Technical Conference Material, Dkt. RM2020-9 (Sept. 28, 2020), at 19; "Report on Certain Aspects of UPS Proposal One", Prof. Michael D. Bradley, attached to Initial Comments of the United States Postal Service on UPS Proposal One, Dkt. RM2020-9 (Dec. 15, 2020), at 13.

variabilities from FY2021, which reflect the Commission's most current analytical methods and views of cost causation. These cost measures have also been adjusted for inflation.

In order to measure the association of these residual costs with groups of products, volume measures for each type of product must be calculated. This can be done using monthly data on class-level volumes. Product-level volumes are generally only available at the quarterly level. Piece count is the most straightforward measure of volume. However, there is substantial variation in the work content associated with different pieces of mail. Whether a piece of mail is a parcel or a letter is a significant driver of these differences, but there are also differences related to weight, the extent of work-sharing, the service level, and other factors. Quarterly measures of weight are available, but as the list above suggests, weight is unlikely to capture all of the differences in work content. Ultimately, UPS's external consultants used a measure of weighted volume that corresponds to differences in the amount of cost driver units that are needed to move the average piece of mail of that type. Their derivation of these product-level measures of cost driver units per piece is based upon the constant elasticity cost model approximation that has been approved by the Commission and is widely used in Postal Service costing.

The analysis multiplies cost driver units per piece by piece counts, and then sums the results across the products contained in three product categories: domestic competitive products, domestic market-dominant products, and international mail. The resulting monthly sums constitute the key explanatory variables of interest. However, residual (non-volume variable) costs can also vary for reasons other than variation in

mail volumes. For example, the Postal Service has noted that the number of delivery points has grown in recent years, which would be expected to increase costs, all things equal. Similarly, weather differences may increase costs in some months and lower them in others, relative to the average. To account for such effects, the analysis incorporates a rich set of control variables. The full set of these variables used in the analysis is discussed in further detail in the Technical Appendix to this Comment.

The regression analysis relates changes in costs to changes in mail volumes, by product group, in each of four major cost categories defined by UPS's external consultants: Delivery, Clerks & Mailhandlers, Transportation, and a residual category labeled "Other." The full regression results appear in the Technical Appendix. These results generally indicate that there is a strong and positive relationship or association between domestic competitive product weighted volumes and the residual (non-volume variable) costs in that category. In all four categories considered, the strength of the statistical relationship satisfies the standard thresholds used in economic research. An example interpretation of the coefficients is that for every dollar in the recognized volume variable delivery costs of competitive products, there is $0.77 in associated institutional costs, after controlling for the effects of market-dominant volumes, delivery points, and other controls.

This analysis also indicates that there is a strong association between market-dominant products and the residual cost measure in three of the four categories analyzed. However, the estimated effect of competitive product weighted volumes exceeds that of market-dominant product weighted volumes in all four categories analyzed. The relationship between international mail volumes and the residual (non-

volume variable) cost measure is weaker and not generally significant. UPS's external consultants have run similar analyses using the other two volume measures discussed above—piece counts and pounds. They continue to find a strong and statistically significant relationship between competitive product volume and residual costs when using these less sophisticated workload measures. In short, there is strong evidence of costs, beyond those currently attributed to competitive products, that have a strong association with competitive products.

In order to convert these relationships into dollar figures that can be used to identify costs disproportionately associated with competitive products, above and beyond attributable costs, a few simple calculations are needed. These calculations appear in Table 2. First, the coefficients on competitive mail must be multiplied by volume variable costs in the most recent year. This calculation yields, for each of the four categories, a measure of disproportionately associated residual (non-volume variable) costs that are associated with competitive products. Next, the inframarginal costs associated with competitive products were deducted from the disproportionately associated residual costs calculated here. These final adjusted results provide strong evidence of nearly $4 billion in institutional costs—which by definition are costs above and beyond those already attributed to competitive products—that are not only disproportionately, but rather, *completely* associated with competitive products. These totals have been calculated using methods and standards that are widely used by economists to identify the relationships between multiple variables of interest.

TABLE 2: CALCULATION OF INSTITUTIONAL COSTS ASSOCIATED WITH COMPETITIVE PRODUCTS, FY2021 (MILLIONS OF DOLLARS)

Cost Pool		CP-related Non-VV Cost per weighted unit	Cost-weighted Competitive Product Volume	CP-related Non-VV Costs	Inframarginal Costs	Institutional Costs Associated with Competitive Products
		[1]	[2]	[3]	[4]	[5]
Delivery	[A]	0.767***	3,407	2,613	-	-
Transportation	[B]	0.0824**	4,821	397	-	-
Clerks	[C]	0.0992***	5,048	501	-	-
Other	[D]	0.342*	3,921	1,341	-	-
Total			**17,198**	**4,852**	**1,035**	**3,818**

Sources and Notes:
[A]: Refers to cost segments 6, 7, and 10.
[B]: Refers to cost segment 14.
[C]: Refers to cost segment 3.
[D]: Refers to all other cost segments, excluding uncontrollable components 18.3.3, 18.3.4, 18.3.6, and 18.3.7.
[1]: *** p<0.01, ** p<0.05, * p<0.1, See Regression Results.
[2]: Volume x unit-VVC costs for associated cost pool.
[3]: [1] x [2].
[4]: USPS-FY21-1\Public_FY21CRAReport.xlsx. See difference in Attributable Cost and Volume Variable Cost, tab 'Cost3'.
[5]: [3] - [4].

To be clear, even after assigning the approximately $3.8 billion associated with competitive products to the appropriate share percentage, the Commission would still need to assign an appropriate share for the remaining $27.9 billion that the regression analysis finds associated with neither market-dominant nor competitive products.[113] The proper approach for that remaining amount would be to use the stand-alone cost test discussed above, or to apply the attributable-cost percentage. That is because the remaining amount consists of costs that support both market-dominant and competitive

[113] Analogous calculations as those presented in Table 2 are provided in UPS-RM2022-2-NP1.

products. As private companies cannot ignore costs that support multiple products, there can be a level playing field—and a financial stable Postal Service—only if the Postal Service likewise ensures that competitive products cover an appropriate share of these costs. And as discussed above, the best estimate of the appropriate share of such costs that should be covered by competitive products is to look at the costs that would disappear in the absence of competitive products, or to use the share of attributable costs that are attributed to competitive products.

III. THE COMMISSION'S PROPOSED FORMULA-BASED APPROACH IS ARBITRARY AND CAPRICIOUS

All of these proposed approaches by UPS are far superior to what the Commission proposes to adopt instead—a formula that violates the Accountability Act, and is arbitrary and capricious. The Commission's formula comprises several elements, none of which is tethered to the Act's requirements or the purpose of the statute.

A. The Seed Value For The Commission's Formula Is Arbitrary

To begin, Commission's formula is built upon on a seed value of 5.5% that is run retroactively from 2007.[114] The 5.5% value was arbitrary and artificially low even when first introduced in 2007. That year, the Commission ordered the appropriate share to be set at 5.5% because it was "mindful of the risks of setting it too high,"[115] and wanted to give the Postal Service "flexibility to compete," given that the Accountability Act had just been passed.[116] Even back in 2007, the Postal Service admitted the 5.5% rate was

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[114] Order No. 6043, at 102, 106.

[115] Order Proposing Regulations to Establish a System of Ratemaking, Dkt. No. RM2007-1 (Aug. 15, 2007) at 73.

[116] Order Proposing Regulations to Establish a System of Ratemaking, Dkt. No. RM2007-1 (Aug. 15, 2007) at 73; *see* Order No. 4402 at 7 ("The Commission set the minimum contribution level lower due to the differences between the old ratemaking

"relatively low,"[117] and it was clear the de minimis 5.5% rate was supposed to be a temporary measure to facilitate the Postal Service's business transition. Yet, because of the Commission's reluctance to update the appropriate share, the de minimis 5.5% rate persisted for *over 10 years*.

That 5.5% rate should be put to rest, not built into the formula that will calculate the appropriate share for the next five years or more. Seeding the current formula at 5.5% means that the appropriate share will be artificially depressed as long as the formula is used. A simple look at the Commission's proposed formula table shows that even under the formula's own terms, it took 14 years—from FY2007 to F2021—for the appropriate share to rise from 5.5% to 9.1%. Extrapolating this trend over the next 14 years, the appropriate share requirement would likely remain below 15% even as the competitive products business surpasses the market-dominant business in revenues and attributable costs. Given that competitive products' actual contribution to institutional costs was 39.2% in FY2021, the Commission's formula would never lead to an appropriate share that comes close to reflecting competitive products' true importance to the Postal Service's business.

As Figure 4 (page 7 *supra*) demonstrates, under the Commission's proposed formula, using the 5.5% seed value, and projecting forward recent trends in the various factors used in calculating the Commission's formula[118]—the appropriate share

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system and the new one being implemented pursuant to THE ACCOUNTABILITY ACT.").

[117] Initial Comments of the United States Postal Service on the Second Advance Notice of Proposed Rulemaking, Dkt. No. RM2007-1 (Jun. 18, 2007) at 25.

[118] Those factors include competitive products revenue and attributable costs and competitor revenues.

requirement would still be below 12% in FY2025, even though competitive products' share of both revenues and attributable costs will likely exceed 50% by then.

This result is indefensible when one considers that competitive product revenues have grown by 41.9% over the past three years (FY2019 to FY2021),[119] while market-dominant revenues have shrunk by 9.0% over the same time frame.[120] Given that the seed value of 5.5% is so far removed from the nature of the Postal Service's current business and the secular market trends, the Commission's persistence in adopting this value is arbitrary.

B. The Competitive Contribution Margin For The Commission's Formula Is Arbitrary

The formula's use of the Commission's Competitive Contribution Margin ("CCM") also is arbitrary and fails to conform to Section 3633's requirements. A modified descendant of the Lerner Index, the CCM focuses solely on whether the Postal Service is *overpricing* competitive products. In so doing, it ignores whether the Postal Service might be *underpricing* competitive products because of a failure to consider all associated costs—which is the Accountability Act's real concern.[121]

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[119] United States Postal Service, Revenue, Pieces, and Weight by Classes of Mail and Special Services (2019-2021), https://about.usps.com/what/financials/.

[120] United States Postal Service, Revenue, Pieces, and Weight by Classes of Mail and Special Services (2019-2021), https://about.usps.com/what/financials/.

[121] *See* Comments of United Parcel Service, Inc. On Notice of Proposed Rulemaking to Evaluate the Institutional Cost Contribution Requirement for Competitive Products, Dkt. No. RM2017-1 (Apr. 16, 2018) at 29-33; Comments of United Parcel Service, Inc. on Revised Notice of Proposed Rulemaking to Evaluate the Institutional Cost Contribution Requirement for Competitive Products, Dkt. No. RM2017-1 (Sep. 12, 2018) at 40.

As the D.C. Circuit has recognized, Section 3633 was designed to prevent the danger of the Postal Service underpricing its competitive products by "using revenues from market-dominant products . . . to defray costs competitive products would otherwise have to be priced to cover." *United Parcel Serv., Inc. v. Postal Regul. Comm'n*, 890 F.3d 1053, 1055 (D.C. Cir. 2018). To the extent the Postal Service cuts competitive product prices to a level where they barely cover their attributable costs, the CCM would still call for a *reduction* in competitive products' share of institutional costs. As such, the CCM component is untethered to the Act's requirements and contradicts Section 3633(b)'s express requirement that the appropriate share and its constituent parts reflect the "prevailing competitive conditions in the market."

The CCM also relies on a key input—attributable cost—which is an unreliable gauge for measuring market power. Given that attributable costs are an administrative construct, whose measurement relies heavily on petitions to change analytical principles via the regulatory process, some changes in attributable costs reflect regulatory legwork rather than genuine changes in economic costs. Further, the inclusion of attributable costs in the CCM component creates a perverse situation where even if competitive products' attributable costs are increasing, the CCM (and thus the appropriate share) would *fall*—implying an inverse correlation between competitive attributable costs and the competitive share of institutional costs. Such an outcome is arbitrary and unjustified.

C. The Competitive Growth Differential For The Commission's Formula Is Arbitrary

The Commission's Competitive Growth Differential ("CGD") likewise is arbitrary and does not conform to Section 3633's requirements. The CGD is designed to capture

the change in size of the Postal Service's competitive-products business relative to its private competitors. But the relative rate at which the Postal Service's revenue grows compared to its competitors says nothing about the extent to which the Postal Service's competitive products are responsible for its costs. Weighting the CGD by the Postal Service's overall market share is similarly arbitrary, and bears no relation to the requirements of Section 3633(b).

The CGD also does nothing to promote fair competition, because the CGD will have no effect on the appropriate share as long as the Postal Service's revenue growth is no greater than its competitors', even if the Postal Service's market share by *volume* is increasing rapidly. The CGD's very attribute of measuring market share by *revenue*—rather than volume, profit, or some other measure—creates a perverse incentive for the Postal Service to price competitive products below market.

Furthermore, the Commission's measure of the "market for competitive postal services" is clearly flawed. The Commission purports to measure the "market" by adding competitive products revenues to Census revenue data on establishments in the "Couriers and Messengers" industry. But this Census measure includes revenues from establishments and firms in unrelated industries, such as firms who provide grocery, alcoholic beverage, and restaurant delivery services.[122] This "market" definition thus provides further evidence of the arbitrary nature of the Commission's formulaic approach to setting the appropriate share requirement.

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[122] The relevant industry classification (or "NAICS") code 492 ("Couriers and Messengers") includes "Couriers and Express Delivery Services" and "Local Messengers and Local Delivery." See https://www.census.gov/naics/?input=492&year=2022&details=492210 for a description of the latter industry.

D. The Commission's Equal Weighting Of The Competitive Contribution Margin And The Competitive Growth Differential Is Arbitrary

Finally, even putting aside the basic problems with the CCM and CGD variables in the first place, the Commission's decision to apply equal weight to these two different measures is entirely arbitrary. Although the Commission states that Section 3633 does not "prescribe the relative weight that the Commission must give to any particular circumstance it deems to be relevant,"[123] the Commission fails to provide any justification for this weighting.

UPS has previously shown—and it is axiomatic—that depending on how the CCM and CGD are weighted (*i.e.*, 10% for one and 90% for the other, or 50% for each), the appropriate share over the years would diverge significantly. Given this potential disparity, the Commission's decision to maintain the equal weighting of the CCM and CGD components remains arbitrary. This is another example of where the Commission has adopted an approach that does not meet the exacting standards of economic rigor that it demands of proposals that would increase the appropriate share percentage.

CONCLUSION

The Commission should adopt a metric that meets the recognized statutory purpose of the appropriate share requirement and the requirement to consider all relevant circumstances, including costs uniquely or disproportionately associated with competitive products. The proposed formula fails these requirements.

Accordingly, the Commission should instead adopt one of the following approaches, alone or in combination: (1) using the attributable costs percentage as the

[123] *Id*. at 51.

appropriate share of institutional costs; (2) using a "balanced budget" approach whereby the appropriate share would be whatever percentage of institutional costs that is not covered by market-dominant products; (3) subtracting out the stand-alone costs of the market-dominant business; (4) taking account of costs uniquely or disproportionately associated with competitive products by identifying specific categories of costs that are driven by competitive products; or (5) taking account of costs uniquely or disproportionately associated with competitive products through regression analysis.

Respectfully submitted,

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Technical Appendix

IN SUPPORT OF UPS INITIAL COMMENTS IN DKT. NO. RM2022-2

FEBRUARY 25, 2022

Table of Contents

I. Introduction

This Technical Appendix describes the primary data sources, data construction process, robustness testing, and full results of the analysis summarized in the main body of UPS' Comments. As described there, this econometric approach combines information from the Postal Service's annual compliance filings with more granular information on costs, volumes, and mail mix that are available at either the monthly or the quarterly level. The analysis described here seeks to identify costs uniquely or disproportionately associated with competitive products by using a regression-based approach. Specifically, this study investigates the extent to which temporal variation in unattributed costs can be explained statistically by temporal variation in the mail volumes delivered by the Postal Service.

The data used in this analysis describe monthly variations in cost and volume over FY2014-2021. This period was characterized by a long-term secular decline in market dominant mail volumes and a long-term rise in competitive product mail volumes. However, there was also substantial variation at the monthly and quarterly levels in market dominant and competitive product mail volumes over this time. This variation allows us to identify the extent to which costs – beyond those directly attributed to the various classes of mail – are associated with each type of mail.

II. Data

The analysis relies upon the following data sources:

- USPS Non-Public Cost Segments and Components (CSC) Report for Fiscal Year 2021[1]
- USPS Revenue, Pieces and Weight (RPW) reports
  - Quarterly reports for Fiscal Years 2014-2021[2]
  - Annual report for Fiscal Year 2021[3]
- USPS Preliminary Financial Information (PFI) report

[1] USPS-FY21-LR-NP12/FY21NonPublic Cost Segs and Comps.xlsx.

[2] Revenue, Pieces, and Weight Reports, Q1 2014 – Q4 2021.

[3] Revenue, Pieces, and Weight Reports, FY 2021.

  - Monthly, Fiscal Years 2014-2021[4]
- USPS National Trial Balance and Statement of Revenue and Expenses
  - Monthly, Fiscal Year 2014-2021[5]
  - These monthly costs are mapped onto cost segments by account number using the Reconciliation to Financial Statements (Library Reference 5 in each year's Annual Compliance Review filing)[6]

III. Definitions and methodology for constructed variables

A. Definition of product and cost categories

We assign each 2021 CSC cost component to one of four **cost categories:**

- Delivery – cost components 6, 7, and 10;
- Transportation – cost component 14;
- Clerks and Mailhandlers (or equivalently, "Clerks") – cost component 3; and
- Other – all other cost components, excluding those (18.3.3, 18.3.4, 18.3.6, and 18.3.7) that are either partially or fully comprised of costs that the Postal Service deems uncontrollable.

We focus the analysis on three **product categories:**

- Domestic Market Dominant Products ("MD") – USPS reporting divides MD into 6 **classes:**[7] first class mail, package service, periodicals, marketing mail, U.S. Postal Service Mail and Free Mail.
- Domestic Competitive Products ("CP") – USPS reporting treats CP as a **class** of its own.

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[4] USPS Preliminary Financial Information (Unaudited) Reports, October 2013 – September 2021. The data is limited to this period because FY14 is the first full fiscal year for which the monthly reports include international volumes.

[5] National Trial Balance Reports, October 2013 – September 2021.

[6] Reconciliation to Financial Statements, FY14 – FY21. See e.g. USPS-FY21-5/FY21.5 RealTB.Public.Redacted.xlsm. We later refer to these as the "LR5 Reports."

[7] USPS sometimes divides products among classes differently in different reports. Unless otherwise noted, this analysis uses the class-product hierarchy in the USPS CSC reports.

- International mail (Int.) – This category contains a mix of competitive and market dominant international products. Available monthly data do not allow us to identify and separate these two subcategories. Accordingly, the analysis treats international mail as a distinct product category, which accounts for relatively small volumes.

B. Construction of volume measures

We construct three measures of volume at the monthly product category level: piece counts (volume), workload-weighted volume, and pounds of mail. Workload-weighted volume is our preferred explanatory variable, as it most closely corresponds to the cost-driver based approach to costing used by the Postal Service and approved by the Commission. The construction of workload-weighted volume captures the number of cost driver units associated with each piece of mail. Specifically, it is a linear approximation of cost driver units, based on widely-used USPS modeling assumptions.

The Commission and the Postal Service have long regarded the constant elasticity cost function as an acceptable approximation of more complex mathematical models of the relationship between costs and product volume. Professor Michael Bradley discussed the concept of a "calibrated" cost function in a paper published in 1999.[8] Charles McBride offers the following description of such a cost function:

> A calibrated model has parameters that are determined from a variety of sources, including econometric studies, engineering studies and even informed judgment. The calibrated model has a constant elasticity structure.[9]

The Postal Service uses the constant elasticity approximation in its Annual Compliance Review filings to calculate the inframarginal costs associated with individual products and groups of products. Both the Commission and Professor Bradley have opined that use of the constant elasticity is acceptable in analyzing the response of costs to small changes in volume.[10]

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[8] Bradley, Michael; Jeff Colvin and John Panzar (1999), "On Setting Prices and Testing Cross-Subsidy Using Accounting Data," Journal of Regulatory Economics, 16: 83-100.

[9] The Calculation of Postal Inframarginal Costs, Charles McBride, https://www.prc.gov/sites/default/files/reports/McBride%20092814.pdf

[10] *See* Order No. 399, Dkt. No. RM2010-4 (Jan. 27, 2010), at 4. *See also* Bradley, Michael, "Analysis of UPS Proposals One and Two, and the Supporting Report of Dr. Kevin Neels." January 25, 2016. Docket No. RM2016-2.

In our analysis, we use this approximation in connection with small month-to-month changes in volume. The analysis is based on the use of the constant elasticity approximation to describe the relationship between costs and volumes for the four cost categories described above. To explain our methodology we first introduce some notation. Within each cost category, let:

E_t = total accrued costs in period *t*

d_t = total cost driver units in period *t* (not directly observable)

PC_{jt} = piece counts for product *j* in period *t*

VVC_{jt} = volume variable costs for product *j* in period *t*

m_t = marginal cost per cost driver unit in period *t*

η = elasticity of cost with respect to the cost driver

α_j = cost driver units per piece for product *j*

In a constant elasticity model, total costs are given by:

$$E_t = \beta d_t^{\eta} \quad (1)$$

Marginal cost (per cost driver unit) is given by:

$$m_t = \eta\beta d_t^{\eta-1} \quad (2)$$

Bradley, et al. noted that the relationship between the number of cost driver units and volume is not necessarily linear.[11] However, the assumption of linearity is commonly made,[12] and we adopt that convention here. In our model, cost driver units per piece can vary across products, but within a product are constant over time and over volume levels. Given this assumption, the total number of cost driver units in a cost category is given by:

$$d_t = \sum_j \alpha_j PC_{jt} \quad (3)$$

[11] See Bradley, et al. (1993), page 144.

[12] See, *e.g.*, Bradley, Michael; Jeff Colvin and John Panzar (1999), "On Setting Prices and Testing Cross-Subsidy Using Accounting Data," *Journal of Regulatory Economics*, 16: 83-100. As reported by McBride, in this paper the driver D_t is calculated as a weighted sum of the product volumes, where the weight for a given product is the amount of the driver required for one unit of the product. See McBride page 2.

Total volume variable cost for product j is then given by:

$$VVC_{jt} = PC_{jt}\alpha_j m_t \qquad (4)$$

These equations are invariant to changes in the definition of the cost driver unit. Any normalization to the number of cost driver units will be fully offset by changes in the values of β and each α_j, such that each E_t and VVC_{jt} will remain unchanged. We can, for example define cost driver units such that each cost driver unit is associated with $1 of volume variable cost in a chosen benchmark year. We adopt this approach, using FY2021 as the benchmark year.[13]

The value of η is equal to the ratio of the sum of volume variable costs to total accrued costs E_t in a cost category. Knowing η and the number of cost driver units, we can then identify the value of β from the total expenditure equation (1), and then the α_j values for all other products. We can then apply equation (3) to volumes for any time period to compute the total workload (in cost driver units) associated with product volumes handled by the Postal Service during that time period. These measures of total workload will be comparable over time.

As a measure of the $\alpha_j m_t$ term in (4), we use the average unit volume variable cost (UVVC) from benchmark year FY2021 for each product *j.* This approach defines a cost driver unit as the quantity associated with one dollar of volume variable cost in FY2021. The product $PC_{jt}UVVC_{j,2021}$ then provides a measure of the workload associated with volume PC_{jt}, in terms of cost driver units subject to the normalization discussed above. We call this measure "workload-weighted volume."

We carry out the calculations described above separately for each of the four cost categories in our analysis. In Section IV.C, we show that adding curvature to this measure by performing our regression analysis in logs does not change our results significantly, and does not improve model fit significantly. This result indicates that the linearity of this approximation is not what drives our findings, and leads us to conclude that this linear approximation of workload is appropriate for the scale of the variation in the observed data.

Some might question why it is best to use cost driver unit values per piece computed from a single benchmark year, rather than computing them separately for each fiscal year. If costs were appropriately adjusted for the effects of inflation, and if the Postal Service followed a consistent approach over time in calculating volume variable costs, the two approaches would yield comparable results. However this alternative approach is unfeasible, because the Postal

[13] Alternatively, we could normalize one cost driver unit to be the cost driver value associated with one single piece first class mail. This normalization would imply an α value of 1 for that benchmark product.

Service has not used a consistent costing methodology over the time period under study. Within its broad activity-based costing approach it has continually refined and updated its cost attribution methods. These changes would introduce inconsistencies over time in the computed workload measure if fiscal year-specific volume variable costs per piece were used. By calculating the $\alpha_j m_t$ values from the most recent fiscal year's data and methodology, we assure consistency over time, and also assure that our workload measures are based on the most up-to-date costing methods available.

In addition to our preferred volume measure, workload-weighted volume, we consider also two other volume measures: piece counts, and total pounds of mail.

1. Piece counts

First, we calculate monthly piece counts for each of the three product categories of mail, relying principally on the monthly PFI reports published by the Postal Service. The PFI reports do not provide product-level piece counts, so we utilize the quarterly RPW reports to account for changes in product mix within the PFI class-level figures.

We first collect the quarterly piece count for each PFI-defined class from the RPW reports. We compute each product's (piece count) share of the PFI-defined class to which it belongs. Call these shares $s_{j,q}$ for each product *j* and quarter *q*. We use these shares to weight the monthly class-level figures reported by the PFI and calculate the monthly piece counts for each product. That is, we calculate the monthly piece count for each product *j* by

$$PC_{j,m} = PC_{j,m}^{PFI} \cdot s_{j,q}$$

where $PC_{j,m}^{PFI}$ is the monthly piece count for the PFI-defined class that contains product *j*. We then sum these piece counts over products within each CSC-defined classes, and then over those classes within the three product categories described above, using $PC_{p,m}$ to represent monthly piece counts for each product category *p = MD, CP,* or *Int*.

2. Workload-weighted volume

As explained above, workload-weighted volume is the most appropriate volume variable in our analysis because it most closely corresponds with the Postal Service's costing methodology. It is a measure of the total number of cost driver units in a given month, in each product category.

This measure uses the piece counts calculated above and unit volume-variable cost (UVVC) at the product level, for each cost component, obtained from 2021 CSC files.[14] For each cost component *k,* the unit UVVC for product *j* is simply

$$UVVC_{k,j} = \frac{VVC_{k,j}}{PC_{j,2021}},$$

where $VVC_{k,j}$ is the VVC for component *k* and product *j* in FY2021, and $PC_{p,2021}$ is the total piece count (from the annual RPW) for product *j* in FY2021. We then sum over the appropriate components *k* to aggregate the component-level UVVCs to four cost categories described above: Delivery, Transportation, Clerks & Mailhandlers, and Other. The result is a set of UVVCs of the form $UVVC_{c,j}$ for each cost category *c.*

Lastly, we calculate monthly workload-weighted volume (WWV) in each cost category *c* for each product categories *p* by:

$$WWV_{c,p,m} = \sum_{j \in p} UVVC_{c,j} \cdot PC_{j,m}$$

By construction, this variable is expressed in terms of constant FY2021 dollars.

3. Pounds

As an additional measure of volume, we construct a measure of mail weight (in pounds) for each product category *p*. Class-level mail weight is reported at the quarterly level in the RPW reports. However, within-quarter changes in mail mix may cause class-level average weight per piece to vary substantially by month. To account for this variation, we collect average weights at the product level from the quarterly RPW reports, matching the PFI reports' breakout of the products that make up MD and CP. Then for each product *j,* in each month *m,* quarter *q*, we calculate the total weight *W* (in pounds) by

$$W_{j,m} = PC_{j,m} \cdot \frac{\mathrm{W}_{j,q}}{PC_{j,q}},$$

and then sum over appropriate products *j* to calculate product category level weights, $W_{p,m}$.

[14] Although technically, the FY2021 CSC data reports the sum of VVC and product-specific, product-specific costs are negligible by comparison to VVCs.

C. Calculation of non-volume variable costs

Next, we describe the cost measure that serves as the dependent variable in our regressions, non-volume variable costs (NVVC). These costs are not attributed to specific products by the Postal Service, and the regression analysis shows that some share of these costs are actually disproportionately associated with product volumes.

We first collect accrued monthly cost at the account level from USPS National Trial Balance data, and we map this data to cost segments using the LR5 reports. We then aggregate to the cost category level by summing across the appropriate segments.

As the Postal Service's expert has explained,[15] monthly VVC for a cost component can be computed by multiplying that component's annual variability by its monthly accrued cost. In other words, for cost component *k*:

$$VVC_{k,m} = \varepsilon_k E_{k,m}$$

where $E_{k,m}$ is the accrued cost for component *k* in month *m,* and ε_k is the annual variability, which may be calculated by:

$$\varepsilon_k = \frac{VVC_k}{E_k},$$

where VVC_k and E_k are the sums of the respective quantities over the course of the year. We perform this analysis at the cost category *c* level, so that

$$\varepsilon_c = \frac{VVC_c}{E_c},$$

where VVC_c and E_c are the sums of the respective quantities over the appropriate components.

[15] *See*, *e.g.,* "Seasonal Volume Variations and Product Costing", Prof Michael D. Bradley. https://www.prc.gov/docs/114/114665/Seasonal%20Volume%20Variations_Costing.pdf (slide 19); and "Report on Certain Aspects of UPS Proposal One", Prof. Michael D. Bradley. https://www.prc.gov/docs/115/115383/Bradley%20Report%20UPS%20Proposal%20One.pdf (p. 13).

We use the 2021 CSC data to calculate annual variability ε_c for each component. We use this annual variability across all years in the data.[16] Using the above relationships, it is straightforward to compute monthly non-volume variable costs (NVVC)[17] in each cost category *c*, for each month *m*.

$$NVVC_{c,m} = E_{c,m} - \varepsilon_c E_{c,m}$$

This NVVC measure is then adjusted for inflation (as described below), and then used as the dependent variable in the econometric analysis that follows.

D. Inflation adjustment

While the explanatory variables $WWV_{c,p,m}$ are expressed in constant workload units, and therefore require no adjustment for inflation, the historical accrued costs and NVVCs are measured in current dollars, and therefore must be adjusted for inflation. NVVCs are adjusted to 2021 dollars through a method that accounts for different levels of the appropriate CPI for different USPS cost drivers.

Using the FY21 LR5 report, we calculate weights (*wt*) by cost component (*k*) in each listed cost type *i* based on that cost type's share of total accrued cost *E*:

$$wt_{k,i} = \frac{E_{k,i}}{E_k}$$

We then construct corresponding inflation indices for each cost type listed in the LR5 report, all indexed to 100 for FY21:

- For all cost types other than labor (i.e. Relocation, Transportation Travel, Construction, IT, etc.), we collect indices directly from the BLS.

[16] We use the 2021 data because, as mentioned in Section III, the Postal costing methodology has changed over time. However, the assumption that each ε_c is constant across years is also consistent with the USPS constant-elasticity cost modeling assumption, because this ε_c is equivalently the η in Equation (1).

[17] NVVC is closely related to the Institutional Cost measure computed by the Postal Service. It differs from Institutional costs in that it includes product- and group specific costs, which are generally very small, and inframarginal costs.

- For labor, we calculate a Fisher price index based on Occupational Employment Statistics from the BLS data on Postal Service wages. We first calculate a Laspeyres price index:

$$LPI_{fy} = \frac{\sum Wg_{occ,fy} * Emp_{occ,fy-1}}{\sum Wg_{occ,fy-1} * Emp_{occ,fy-1}}$$

Here *Wg* refers to the mean hourly wage, *Emp* refers to the count of employees, *occ* refers to the occupational code (corresponding to "Chief Executives", "Accountants and Auditors", "Budget Analysts", etc.), and *fy* refers to the fiscal year.

Next, we calculate a Paasche price index as

$$PPI_{fy} = \frac{\sum Wg_{occ,fy} * Emp_{occ,fy}}{\sum Wg_{occ,fy-1} * Emp_{occ,fy}}$$

Next, we can calculate the Fisher price index as

$$FPI_{fy} = \sqrt{LPI_{fy} * PPI_{fy}}$$

Since the BLS occupational data are available only through FY20, we project the resulting Fisher index to FY21 using an inflation multiplier calculated from the FY21 USPS Integrated Financial Plan.[18] We lastly reweight the Fisher index to 100 in FY21.

Using the weights and inflation indices, we then calculate a cost component-level CPI that accounts for different levels of the appropriate CPI for different USPS cost drivers:

$$CPI_{k,fy} = \sum_{t \in 1} wt_{k,t} * CPI_{k,t,fy}$$

Using this measure, we adjust accrued costs and NVVC to constant 2021 dollars.

E. Additional control variables

We include the following variables as additional right-hand side controls in our analysis:

- Number of Delivery Days in month *m*;

[18] https://about.usps.com/what/financials/integrated-financial-plans/fy2021.pdf

- The number of USPS Delivery points by calendar year;[19]
- A COVID indicator (beginning in March 2020); and
- Month and fiscal year fixed effects.

IV. Regression analysis and robustness testing

A. Specification

The general form of our regression approach is

$$NVVC_{c,m} = \beta_0 + WWV_{c,m}\beta_1 + \ + X\beta_x + \ \varepsilon.$$

Here $WWV_{c,m}$ contains $WWV_{c,m,CP}$, $WWV_{c,m,MD}$, and $WWV_{c,m,Int}$, and *X* contains the set of control variables. We systematically test for the appropriate controls for each cost category *c.* We first estimate the regression with the full set of controls, then perform an F-test on each control (and a joint f-test on both the set of month dummies and the set of fiscal year dummies). We drop the control with the highest F-statistic (as long as it is greater than 0.1, a standard significance level in statistical analysis), and re-estimate the regression, iterating until all controls have an F-statistic < 0.1. We use Newey-West standard errors, which are robust to heteroscedasticity and auto-correlation.

Table 1 contains the results for each regression in the Delivery cost category, Table 2 contains results for Transportation, Table 3 contains results for Clerks & Mailhandlers, and Table 4 contains results for all other costs.[20] The results for each specification are reported, with the final column in each table containing the "final" specification, with only the appropriate controls.

[19] Source: A decade of facts and figures | Postal Facts - U.S. Postal Service (usps.com). Accessed 2/9/2022. In "On the Estimation of a Top-Down Model for City Carrier Street Time," p.91, Prof Michael D. Bradley notes that within-year variation in delivery points is minimal.

[20] In these regressions, the FY2021 dummy variable is collinear with the delivery points control and the other FY dummies, so it is omitted in regressions where delivery points are included. The collinearity is driven by two factors: growth in delivery points is roughly linear in years, and the USPS data on delivery points is reported only to the nearest 0.1 million.

B. Discussion of results

In each cost category, the effect of an additional unit of workload-weighted CP volume is associated with a significant increase in non-volume variable costs. It is important to note that because the regressions control for workload-weighted MD volume, **the non-volume variable costs associated with CP are exclusively associated with CP.**

In other words, to prove a "disproportionate association" between CP and non-volume variable costs, it is not necessary to show any particular relationship between these regression coefficients (e.g. that the CP coefficients are significantly larger than the MD coefficients). It is only necessary to show that the regression coefficients on CP volume are significantly larger than zero. This condition is readily met at standard confidence levels in all of the cost categories. In a post-estimation step, we conservatively adjust for inframarginal costs (deducting them from CP associated costs), and show that this strong association with CP volume also holds with respect to institutional costs at high statistical confidence levels.

An example for the exact interpretation of the regression coefficients of interest follows. The coefficient on workload-weighted CP volume in the Delivery cost category is 0.767 (Table 1, column [2]). This value implies that an additional increment of CP volume associated with an increase in cost driver units corresponding with a $1 increase in Delivery VVC is also associated with a nearly 77-cent increase in Delivery non-VVC, in 2021 dollars. On the other hand, an additional increment of MD volume associated with the same $1 increase in Delivery VVC is associated with a 19-cent increase in Delivery non-VVC.

In Transportation, an additional workload-weighted unit of CP volume is associated with an 8-cent increase in non-VVC; in Clerks and Mailhandlers, it is associated with a 10-cent increase, and in Other costs, it is associated with a 34-cent increase.

TABLE 1: DELIVERY REGRESSION RESULTS

	Spec 1	Spec 2
	[1]	[2]
Number of Delivery Days (month)	25.10***	25.04***
	(3.851)	(3.759)
Weighted CP Volume - Delivery	0.711***	0.767***
	(0.135)	(0.0853)
Weighted MD Volume - Delivery	0.204***	0.190***
	(0.0593)	(0.0628)
Weighted Int. Volume - Delivery	-0.681	-0.788
	(1.019)	(0.977)
Covid Indicator (March 2020 or later)	10.42	
	(17.49)	
Number of USPS Delivery Points	12.22***	11.99***
	(1.868)	(1.853)
month = 2	-23.22**	-23.36**
	(11.32)	(11.54)
month = 3	-13.25	-12.02
	(8.422)	(8.168)
month = 4	-36.71***	-36.34***
	(6.281)	(6.045)
month = 5	-15.96**	-16.03**
	(6.920)	(6.851)
month = 6	-35.78***	-36.19***
	(9.100)	(9.090)
month = 7	-24.37***	-24.58***
	(7.590)	(7.581)
month = 8	-26.75***	-26.63***
	(9.772)	(9.556)
month = 9	-15.74**	-14.74**
	(6.812)	(6.771)
month = 10	-41.54***	-38.63***
	(10.27)	(11.04)
month = 11	-31.22**	-30.39**
	(12.35)	(12.28)
month = 12	69.18***	65.87***
	(16.12)	(15.24)
fy = 2015	0.585	-0.602
	(4.469)	(4.429)
fy = 2016	9.388	7.098
	(6.487)	(6.019)
fy = 2017	0.285	-3.570
	(8.147)	(6.678)
fy = 2018	-4.424	-9.277
	(10.62)	(7.957)
fy = 2019	20.03*	14.80*
	(10.74)	(8.266)
fy = 2020	-4.668	-7.751
	(7.000)	(7.401)
fy = 2021, omitted	-	-
Constant	-1,683***	-1,639***
	(319.1)	(323.4)
Observations	96	96

Sources and Notes: Standard errors in parentheses. *** p<0.01, ** p<0.05, * p<0.1. See UPS-LR-RM2022-2/NP1.

TABLE 2: TRANSPORTATION REGRESSION RESULTS

	Spec 1	Spec 2	Spec 3
	[1]	[2]	[3]
Number of Delivery Days (month)	0.436		
	(1.857)		
Weighted CP Volume - Transportation	0.107***	0.111***	0.0824**
	(0.0373)	(0.0337)	(0.0368)
Weighted MD Volume - Transportation	0.0127	0.0341	0.0708
	(0.150)	(0.135)	(0.106)
Weighted Int. Volume - Transportation	-0.114**	-0.113**	-0.105**
	(0.0566)	(0.0563)	(0.0512)
Covid Indicator (March 2020 or later)	-5.776	-6.006	
	(9.080)	(8.621)	
Number of USPS Delivery Points	3.559***	3.695***	3.761***
	(1.129)	(0.926)	(0.858)
month = 2	-10.62**	-10.48**	-10.22**
	(4.545)	(4.536)	(4.234)
month = 3	-0.367	0.705	0.470
	(5.101)	(2.265)	(2.181)
month = 4	-3.507	-2.563	-2.628
	(4.652)	(2.282)	(2.187)
month = 5	-2.529	-1.606	-1.379
	(4.501)	(2.542)	(2.377)
month = 6	-7.542	-6.256	-5.835
	(6.516)	(4.221)	(3.837)
month = 7	-5.074	-3.929	-3.783
	(5.841)	(3.777)	(3.541)
month = 8	-6.007	-4.557	-4.494
	(6.370)	(3.597)	(3.474)
month = 9	-2.881	-2.182	-2.692
	(4.287)	(3.414)	(3.506)
month = 10	-9.329*	-9.165*	-10.12**
	(5.154)	(5.013)	(4.129)
month = 11	-3.879	-4.335	-4.203
	(3.404)	(2.950)	(2.856)
month = 12	45.25***	44.84***	47.36***
	(9.401)	(9.440)	(11.57)
fy = 2015	-3.514	-3.574	-2.962
	(2.613)	(2.475)	(2.510)
fy = 2016	3.942	3.733	4.354
	(3.134)	(2.854)	(2.996)
fy = 2017	2.406	2.309	3.576
	(3.239)	(3.049)	(2.875)
fy = 2018	1.974	1.878	3.797
	(4.061)	(3.847)	(2.906)
fy = 2019	-5.289	-5.348	-2.971
	(5.234)	(5.039)	(3.546)
fy = 2020	0.931	0.980	1.974
	(3.263)	(3.231)	(3.753)
fy = 2021, omitted	-	-	-
Constant	-460.7**	-477.5***	-490.2***
	(189.1)	(173.2)	(159.3)
Observations	96	96	96

Sources and Notes: Standard errors in parentheses. *** p<0.01, ** p<0.05, * p<0.1. See UPS-LR-RM2022-2/NP1.

TABLE 3: CLERKS AND MAILHANDLERS REGRESSION RESULTS

	Spec 1	Spec 2
	[1]	[2]
Number of Delivery Days (month)	2.680***	2.774***
	(1.009)	(0.996)
Weighted CP Volume - Clerks	0.111***	0.0992***
	(0.0225)	(0.0177)
Weighted MD Volume - Clerks	0.0371*	0.0400*
	(0.0199)	(0.0201)
Weighted Int. Volume - Clerks	0.0281	0.0337
	(0.0646)	(0.0626)
Covid Indicator (March 2020 or later)	-2.677	
	(3.100)	
Number of USPS Delivery Points	2.089***	2.114***
	(0.595)	(0.572)
month = 2	-11.24***	-11.20***
	(2.377)	(2.378)
month = 3	-2.388	-2.776
	(3.075)	(3.028)
month = 4	-9.116***	-9.337***
	(2.377)	(2.368)
month = 5	-6.690***	-6.784***
	(2.199)	(2.220)
month = 6	-11.19***	-11.29***
	(3.271)	(3.329)
month = 7	-10.45***	-10.61***
	(2.861)	(2.887)
month = 8	-7.573**	-7.834**
	(3.449)	(3.426)
month = 9	-6.937***	-7.277***
	(2.593)	(2.692)
month = 10	-6.900***	-7.488***
	(2.124)	(2.049)
month = 11	-6.516**	-6.538**
	(2.777)	(2.812)
month = 12	15.34***	16.33***
	(3.863)	(3.727)
fy = 2015	7.120***	7.396***
	(1.671)	(1.695)
fy = 2016	9.512***	9.907***
	(1.809)	(1.754)
fy = 2017	9.736***	10.47***
	(2.141)	(2.029)
fy = 2018	3.060	4.089*
	(2.262)	(2.066)
fy = 2019	2.760	3.933
	(2.721)	(2.565)
fy = 2020	-4.195*	-3.638
	(2.363)	(2.345)
fy = 2021, omitted	-	-
Constant	-229.3**	-235.4**
	(100.1)	(95.72)
Observations	96	96

Sources and Notes: Standard errors in parentheses. *** p<0.01, ** p<0.05, * p<0.1. See UPS-LR-RM2022-2/NP1.

TABLE 4: OTHER COSTS REGRESSION RESULTS

	Spec 1	Spec 2	Spec 3
	[1]	[2]	[3]
Number of Delivery Days (month)	29.32**	29.75***	29.75***
	(11.39)	(10.97)	(10.97)
Weighted CP Volume - Other	0.440	0.342*	0.342*
	(0.278)	(0.179)	(0.179)
Weighted MD Volume - Other	0.164	0.195	0.195
	(0.198)	(0.201)	(0.201)
Weighted Int. Volume - Other	0.709	0.761	0.761
	(0.875)	(0.849)	(0.849)
Covid Indicator (March 2020 or later)	-18.01		
	(32.24)		
Number of USPS Delivery Points	2.904	3.162	
	(4.447)	(4.461)	
month = 2	-26.29	-25.92	-25.92
	(24.64)	(24.24)	(24.24)
month = 3	-42.82	-45.11	-45.11
	(31.14)	(29.02)	(29.02)
month = 4	-67.16***	-68.27***	-68.27***
	(24.11)	(23.51)	(23.51)
month = 5	-66.49**	-66.73**	-66.73**
	(26.85)	(26.40)	(26.40)
month = 6	-6.766	-6.784	-6.784
	(30.54)	(30.22)	(30.22)
month = 7	-72.22***	-72.75***	-72.75***
	(27.10)	(26.71)	(26.71)
month = 8	-47.65	-48.81	-48.81
	(33.72)	(32.62)	(32.62)
month = 9	1.142	-0.967	-0.967
	(31.57)	(29.39)	(29.39)
month = 10	-52.19**	-56.64**	-56.64**
	(25.46)	(24.08)	(24.08)
month = 11	-13.24	-13.82	-13.82
	(26.79)	(27.01)	(27.01)
month = 12	-28.86	-22.43	-22.43
	(38.62)	(37.10)	(37.10)
fy = 2015	-16.62	-14.75	-11.27
	(12.61)	(11.79)	(12.33)
fy = 2016	-4.564	-1.775	5.181
	(19.60)	(19.02)	(17.04)
fy = 2017	13.75	18.87	29.62*
	(19.36)	(17.32)	(16.75)
fy = 2018	-18.99	-11.96	2.901
	(22.85)	(23.07)	(22.32)
fy = 2019	-1.126	6.853	26.14
	(24.03)	(21.70)	(23.53)
fy = 2020	9.472	13.52	37.24
	(19.28)	(19.26)	(36.51)
fy = 2021, omitted	-	-	
fy = 2021			28.77
			(40.60)
Constant	-504.5	-559.2	-72.55
	(793.1)	(776.4)	(232.2)
Observations	96	96	96

Sources and Notes: Standard errors in parentheses. *** p<0.01, ** p<0.05, * p<0.1. See UPS-LR-RM2022-2/NP1.

C. Log-Log Specification and Fit Testing

As mentioned above, the workload-weighted volume measure is linear in piece count, and it is reasonable to ask whether this linear approach appropriately approximates the relationship between piece counts and workload. A common alternative to a linear approach is to use a natural log specification, which allows for some degree of non-linearity in the relationships between piece counts and this volume measure, as well as between the volume measure and NVVC. A log-log functional form would be consistent with the decreasing-marginal-cost assumption implicit in the USPS constant elasticity cost modeling.[21]

Table 5 reports the results from a log-log regression in each cost category, using the final specifications from each of Tables 1-4.[22]

TABLE 5: SUMMARY OF LOG-LOG REGRESSION RESULTS

	Delivery	Transportation	Clerks	Other
	[1]	[2]	[3]	[4]
Log Weighted CP Volume	0.152***	0.213***	0.155***	0.122*
	(0.0164)	(0.0676)	(0.0357)	(0.0619)
Log Weighted MD Volume	0.0834**	0.124	0.101	0.0971
	(0.0322)	(0.138)	(0.0723)	(0.115)
Log Weighted Int. Volume	-0.0155	-0.0550	-0.00986	0.0515
	(0.0105)	(0.0349)	(0.0163)	(0.0445)
Observations	96	96	96	96

Sources and Notes: Standard errors in parentheses. *** p<0.01, ** p<0.05, * p<0.1. See UPS-LR-RM2022-2/NP1. The weighted volume measures vary by cost category, as described in the main text.

As in the linear versions of these regressions, the coefficient on the CP measure is positive and significant at the 10% confidence level or better in every cost category. The effect in dollar terms of additional CP workload on Non-VV Costs has a less straightforward interpretation than in the linear specification, but it is still clear that after controlling for MD volume, each additional unit of CP workload has a significant association with non-volume variable cost in each cost category. Because the linear and log-log regressions do not share a common dependent variable, it is not appropriate simply to compare R-squared statistics across the two

[21] Specifically, as volumes increase, costs increase at a decreasing rate.

[22] The coefficients on the control variables have been omitted from these tables for the sake of brevity, but are provided in UPS-LR-RM2022-2/NP1.

specifications. One alternative is to take the antilog of the predicted values from the log-log regressions and compute their associated R-squared statistics. When we perform this analysis, we do not find significant differences between these values and the R-squared values from the linear regressions.[23]

For completeness, we also offer a formal test that assesses the relative fit of the log-log and linear regression specifications. We use a Box-Cox test, which performs a transformation on the data and statistically tests the fit of linear and log-log models.[24] The approach transforms each (non-dummy) variable *z* by

$$f(z, \lambda) = (z^{\lambda} - 1)/\ \lambda,$$

and then performs the regressions of interest on the transformed data by maximum-likelihood, also estimating λ.[25] The linear and logged regressions are both special cases of this transformation regression: when $\lambda = 1$, each $f(z, \lambda)$ is equivalent to the untransformed *z*, and in the limit when $\lambda = 0$, each $f(z, \lambda)$ is equivalent to ln(*z*). Thus, it is possible to test hypotheses of the likelihood of the linear and log-log models by testing the hypotheses $\lambda = 1$ and $\lambda = 0$, respectively.[26] We are interested in these tests as a diagnostic for whether the log-log specification fits the data where the linear specification does not.

In the Delivery cost category, the estimated λ value (and standard error) is 0.52 (0.29), and neither hypothesis is rejected at the 0.05 level, indicating that both models fit the data reasonably well.

In the Transportation cost category, the estimated λ is -1.37 (0.28), and both hypotheses λ = 1 and λ = 0 are rejected at the 0.05 level; there is not a high likelihood score for either the linear model or the log-log model.

In the Clerks & Mailhandlers cost category, the estimated λ is 0.56 (0.5), and neither the hypothesis that λ = 1 nor λ = 0 is rejected at the 0.05 level, suggesting that both models fit the data reasonably well.

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[23] See UPS-LR-RM2022-2/NP1.

[24] See Box, G. E. P., and D. R. Cox. 1964. An analysis of transformations. *Journal of the Royal Statistical Society, Series B 26: 211–252*, for a discussion of the Box-Cox transformation.

[25] The estimation routine assumes normal residuals.

[26] E.g. see Godfrey, L. G., and M.R. Wickens. 1981. Testing Linear and Log-Linear Regressions for Functional Form. *Review of Economic Studies XLVIII, 487-496,* for a discussion of this test.

In the Other cost category, the estimated λ is 2.56 (standard error 1.21), and the hypothesis λ = 1 cannot be rejected, while the hypothesis λ = 0 is rejected at the 0.05 level. These results suggest that the linear model provides a better fit to the data.

Thus, we fail to reject the linear model in three of the four cost categories, and the log-log model is also rejected when the linear model is rejected. As indicated in Table 5, the log-log models conform with the sign and significance of the coefficients in the linear models, and in fact show a more statistically significant result in Transportation, the only cost pool where the Box-Cox test does not indicate that the linear model fits the data well.

Taking these results together, we conclude that our workload-weighted volume measure, based on a linear approximation of cost driver units, provides an overall reliable fit for the data, and that the results of our analysis are not driven by the assumption of linearity between volume and cost driver units.

D. Results using alternative volume measures

As an additional robustness check, we also rerun the final regression specifications in Tables 1-4 using the two alternative measures of volume constructed above: piece counts and pounds of mail. These results are reported in Tables 6-9. The results generally confirm those from our preferred volume measures, and in the case of Transportation, show an even greater level of significance for CP volume.

Each regression uses the final set of controls, corresponding to the final columns in each of Tables 1 through 4.[27] Column [1] in each of Tables 6 through 9 restates the primary regressions exactly, while column [2] uses total pounds of CP, MD, and Int. mail, and column [3] uses monthly piece counts of CP, MD, and Int. mail.

As in the main regression, the coefficients on the alternative CP volume measures are always positive and significant, even after controlling for MD volume. Note that these alternative measures of volume are not specific to cost categories. For this reason and those described above, we treat these results as a simple check that confirms the overall result – CP volume is associated with an increase in non-VVC, even after controlling for MD volume and other factors. Thus, even if the Commission were to decide that the use of the constant elasticity approximation and the workload measures derived from it are not appropriate in this context,

[27] The coefficients on the control variables have been omitted from these tables for the sake of brevity, but are provided in UPS-LR-RM2022-2/NP1.

this analysis still provides compelling econometric evidence that substantial shares of non-volume variable costs in each category are associated with competitive products.

TABLE 6: COMPARISON OF DELIVERY REGRESSION RESULTS WITH DIFFERENT VOLUME MEASURES

	Workload-Weighted Volume Measure	Pounds as Volume Measure	Piece Count as Volume Measure
	[1]	[2]	[3]
Weighted CP Volume - Delivery	0.767***		
	(0.0853)		
Weighted MD Volume - Delivery	0.190***		
	(0.0628)		
Weighted Int. Volume - Delivery	-0.788		
	(0.977)		
Weight (lbs) of CP Mail (1000s)		0.154***	
		(0.0303)	
Weight (lbs) of MD Mail (1000s)		0.0297	
		(0.0523)	
Weight (lbs) of Int. Mail (1000s)		-0.505	
		(0.496)	
Piece count of CP Mail (1000s)			0.381***
			(0.0422)
Piece count of MD Mail (1000s)			0.0124***
			(0.00411)
Piece count of Int. Mail (1000s)			-0.201
			(0.239)
Observations	96	96	96

Sources and Notes: Standard errors in parentheses. *** p<0.01, ** p<0.05, * p<0.1. See UPS-LR-RM2022-2/NP1.

TABLE 7: COMPARISON OF TRANSPORTATION REGRESSION RESULTS WITH DIFFERENT VOLUME MEASURES

	Workload-Weighted Volume Measure	Pounds as Volume Measure	Piece Count as Volume Measure
	[1]	[2]	[3]
Weighted CP Volume - Transportation	0.0824**		
	(0.0368)		
Weighted MD Volume - Transportation	0.0708		
	(0.106)		
Weighted Int. Volume - Transportation	-0.105**		
	(0.0512)		
Weight (lbs) of CP Mail (1000s)		0.0372***	
		(0.0108)	
Weight (lbs) of MD Mail (1000s)		0.0179	
		(0.0120)	
Weight (lbs) of Int. Mail (1000s)		-0.196	
		(0.162)	
Piece count of CP Mail (1000s)			0.0858***
			(0.0205)
Piece count of MD Mail (1000s)			0.00266*
			(0.00138)
Piece count of Int. Mail (1000s)			-0.167**
			(0.0793)
Observations	96	96	96

Sources and Notes: Standard errors in parentheses. *** p<0.01, ** p<0.05, * p<0.1. See UPS-LR-RM2022-2/NP1.

TABLE 8: COMPARISON OF CLERKS & MAILHANDLERS REGRESSION RESULTS WITH DIFFERENT VOLUME MEASURES

	Workload-Weighted Volume Measure	Pounds as Volume Measure	Piece Count as Volume Measure
	[1]	[2]	[3]
Weighted CP Volume - Clerks	0.0992***		
	(0.0177)		
Weighted MD Volume - Clerks	0.0400*		
	(0.0201)		
Weighted Int. Volume - Clerks	0.0337		
	(0.0626)		
Weight (lbs) of CP Mail (1000s)		0.0264***	
		(0.00978)	
Weight (lbs) of MD Mail (1000s)		0.00786	
		(0.0147)	
Weight (lbs) of Int. Mail (1000s)		-0.136	
		(0.121)	
Piece count of CP Mail (1000s)			0.0770***
			(0.0119)
Piece count of MD Mail (1000s)			0.00257**
			(0.00115)
Piece count of Int. Mail (1000s)			0.0304
			(0.0592)
Observations	96	96	96

Sources and Notes: Standard errors in parentheses. *** p<0.01, ** p<0.05, * p<0.1. See UPS-LR-RM2022-2/NP1.

TABLE 9: COMPARISON OF "OTHER COSTS" REGRESSION RESULTS WITH DIFFERENT VOLUME MEASURES

	Workload-Weighted Volume Measure	Pounds as Volume Measure	Piece Count as Volume Measure
	[1]	[2]	[3]
Weighted CP Volume - Other	0.342*		
	(0.179)		
Weighted MD Volume - Other	0.195		
	(0.201)		
Weighted Int. Volume - Other	0.761		
	(0.849)		
Weight (lbs) of CP Mail (1000s)		0.110*	
		(0.0597)	
Weight (lbs) of MD Mail (1000s)		0.0679	
		(0.108)	
Weight (lbs) of Int. Mail (1000s)		1.136	
		(1.195)	
Piece count of CP Mail (1000s)			0.167*
			(0.0960)
Piece count of MD Mail (1000s)			0.00570
			(0.00800)
Piece count of Int. Mail (1000s)			0.511
			(0.619)
Observations	96	96	96

Sources and Notes: Standard errors in parentheses. *** p<0.01, ** p<0.05, * p<0.1. See UPS-LR-RM2022-2/NP1.

We also report standard goodness-of-fit measures (R-squared and Adjusted R-squared statistics) for each model and each set of volume measures, in Table 10. Each alternative performs well, with very little difference in R-squared for different independent variables.

TABLE 10: GOODNESS OF FIT MEASURES FROM THE VARIOUS MODELS

	Workload-Weighted Volume Measure	Pounds as Volume Measure	Piece Count as Volume Measure
	[1]	[2]	[3]
Delivery			
R-Squared	0.979	0.973	0.979
Adjusted	0.973	0.965	0.972
Transportation			
R-Squared	0.942	0.946	0.952
Adjusted	0.926	0.930	0.938
Clerks			
R-Squared	0.961	0.955	0.965
Adjusted	0.950	0.942	0.955
Other			
R-Squared	0.677	0.681	0.674
Adjusted	0.579	0.585	0.576

Sources and Notes: See UPS-LR-RM2022-2/NP1.

V. Results

As a final step in the analysis, we calculate the total amount of institutional costs associated with CP activities in FY2021. We do so by multiplying the regression coefficients on workload-weighted CP volume by the FY2021 total of workload-weighted CP volume. This calculation produces the 2021 total of non-volume variable costs associated with CP activities. Table 11 reports these results in column [3] for each cost category.

We recognize that some share of these non-volume variable costs are in fact currently attributed to CP as inframarginal costs. In order to ensure that there is no double-counting, we subtract the full amount of CP-attributed inframarginal costs from the CP-associated non-volume variable costs calculated here. These final adjusted results, reported in Table 11, provide strong evidence that there are over $3.8B in unattributed institutional costs which are fully associated with CP activities.

TABLE 11: CALCULATION OF INSTITUTIONAL COSTS ASSOCIATED WITH COMPETITIVE PRODUCTS, FY 2021 (MILLIONS OF DOLLARS)

Cost Pool		CP-related Non-VV Cost per weighted unit	Workload-Weighted Competitive Product Volume	CP-related Non-VV Costs	Inframarginal Costs	Institutional Costs Associated with Competitive Products
		[1]	[2]	[3]	[4]	[5]
Delivery	[A]	0.767***	3,407	2,613	-	-
Transportation	[B]	0.0824**	4,821	397	-	-
Clerks	[C]	0.0992***	5,048	501	-	-
Other	[D]	0.342*	3,921	1,341	-	-
Total			**17,198**	**4,852**	**1,035**	**3,818**

Sources and Notes:
[A]: Refers to cost segments 6, 7, and 10.
[B]: Refers to cost segment 14.
[C]: Refers to cost segment 3.
[D]: Refers to all other cost segments, excluding uncontrollable components 18.3.3, 18.3.4, 18.3.6, and 18.3.7.
[1]: *** p<0.01, ** p<0.05, * p<0.1, See Regression Results.
[2]: Volume x unit-VVC for associated cost pool.
[3]: [1] x [2].
[4]: USPS-FY21-1\Public_FY21CRAReport.xlsx. See difference in Attributable Cost and Volume Variable Cost, tab 'Cost3'.
[5]: [3] - [4].

For completeness, we also produce the same analysis for MD-related institutional costs in Table 12. The results indicate that a substantially smaller amount of institutional costs are associated with market dominant volumes. The total impact is about $1.9B in unattributed costs, less than half of the figure associated with CP activities, despite workload-weighted MD volumes actually exceeding workload-weighted CP volumes by about 35% in FY2021.

TABLE 12: CALCULATION OF INSTITUTIONAL COSTS ASSOCIATED WITH MARKET DOMINANT PRODUCTS, FY2021 (MILLIONS OF DOLLARS)

Cost Pool		MD-related Non-VV Cost per weighted unit	Workload-Weighted Market Dominant Product Volume	MD-related Non-VV Costs	Inframarginal Costs	Institutional Costs Associated with Market Dominant Products
		[1]	[2]	[3]	[4]	[5]
Delivery	[A]	0.190***	8,002	1,520	-	-
Transportation	[B]	0.0708	2,153	152	-	-
Clerks	[C]	0.0400*	7,251	290	-	-
Other	[D]	0.195	5,801	1,131	-	-
Total			**23,207**	**3,094**	**1,192**	**1,902**

Sources and Notes:
[A]: Refers to cost segments 6, 7, and 10.
[B]: Refers to cost segment 14.
[C]: Refers to cost segment 3.
[D]: Refers to all other cost segments, excluding uncontrollable components 18.3.3, 18.3.4, 18.3.6, and 18.3.7.
[1]: *** p<0.01, ** p<0.05, * p<0.1, See Regression Results.
[2]: Volume x unit-VVC costs for associated cost pool.
[3]: [1] x [2].
[4]: USPS-FY21-1\Public_FY21CRAReport.xlsx. See difference in Attributable Cost and Volume Variable Cost, tab 'Cost3'.
[5]: [3] - [4].

Together, these results permit a decomposition of FY2021 institutional costs into three portions: that portion that can be shown (using standard statistical tools) to be associated with domestic competitive products, those that can be shown to be associated with domestic market dominant products, and a residual amount. Using the FY2021 total institutional cost measure of $33.6B (which includes those components for whom costs are partially or entirely "uncontrollable"), that decomposition is summarized in Table 13. As the Table indicates, the remaining institutional costs after subtracting those that we have shown to be associated with the two major categories of mail volumes amount to $27.9B.

TABLE 13: INSTUTIONAL COST BREAKDOWN ($ MILLION)

		Institutional Cost
Total	[A]	33,634
Associated with Competitive Products	[B]	3,818
Associated with Market Dominant Products	[C]	1,902
Remaining	[D]	27,914

Sources and Notes:
[A]: USPS-FY21-1\Public_FY21CRAReport.xlsx. See difference in Attributable Cost and Volume Variable Cost, tab 'Cost3'.
[B]: Column [5] in Table 11.
[C]: Column [5] in Table 12.
[D]: [A] - [B] - [C].